PHILADELPHIA, AUGUST 9, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON CANCER OF THE PYLORUS, WITH DILATATION OF THE STOMACH; AND ON FIBROID THICKENING OF THE CARDIAC EXTREMITY OF THE STOMACH, PRODUCING OBSTRUCTION.

Delivered at the Hospital of the University of Pennsylvania

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Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—This is a new patient, and I am glad to have the opportunity of bringing him before you, as he illustrates the second stage of the disease of which I was speaking two weeks ago,—viz., cancer of the pylorus. The important points in this man's history are the following. He is an Irishman, 55 years of age; has been a miner, and has always used alcohol freely. The family history is negative. Previous to five months ago, he enjoyed good health. At this time, without any apparent cause, he began to experience dyspeptic symptoms. The important point to be noted is that these symptoms appeared without any change in his habits of living, and while he was taking his usual diet. These dyspeptic symptoms rapidly increased, and vomiting was associated with them. The material vomited was intensely sour and bitter, and was occasionally mixed with coffee-ground material. The time at which vomiting occurred was variable, from half an hour to two hours after eating. He has rapidly lost flesh, losing within the last five months at least thirty-five pounds. There has been no pain in connection with this trouble, so that the totality of the symptoms are dyspepsia, vomiting, and loss of flesh.

Let us study his present condition. The appearance of the tongue is good. The abdomen is scaphoid. In the right hypochondriac region I find a tumor about as large as a chicken's egg, which is movable and can be dragged as low as the umbilicus. It is important to note that the tumor is so movable, for, as you will remember, I made a point of this last week in differentiating between cancer of the pylorus and cancer of the gall-bladder. This mass can be pushed to the right of the umbilicus. This examination gives no pain. Percussion reveals clear tympanitic resonance over the left hypochondrium. This tumor is, in all probability, connected with the stomach, for, although there is no special tympanitic sound characteristic of the stomach, yet this viscus, being larger than the other abdominal viscera, gives a fuller tympanitic note. Further, as this is the position of the fundus of the stomach, it is fair to conclude that the resonance is due to the presence of air in that organ.

With these points, let us see at what diagnosis we can reach. It is obvious that, in all probability, we have to deal with a malignant growth. The history is rather characteristic of an affection of this nature,—viz., the dyspepsia commencing without obvious cause, vomiting, and the throwing off of coffee-ground material, the rapid loss of flesh, and the appearance of a tumor. There is, however, one affection which we should consider in this connection, and that is thickening of the pylorus. This sometimes occurs, especially in those who have been addicted to the use of alcohol. Under such circumstances, the muscular tissue around the pylorus increases in amount, giving rise to a perceptible thickening and producing obstruction of the pylorus. In this particular case the diagnosis is not difficult. The history, with the symptoms which I have named, points clearly to a malignant formation. Another point which favors this idea is the size of the tumor, for in fibroid thickening the growth rarely reaches a considerable size.

Are there any other conditions to be considered? One is the possibility of the existence of an ulcer. The only thing in favor of an ulcer in this case is that there has sometimes been vomiting immediately after food has been taken into the stomach. In the digestive process, about two hours after the ingestion of food there is a tendency for it to pass into the duodenum, but in cancer of the pylorus this is resisted and emesis occurs. I think that the reason that vomiting occurs so soon is because there coexists considerable pyloric obstruction and dilatation of the stomach, which I think has been a marked feature from an early period in this pa-

tient's case. The dilated stomach, always containing partially-fermented food, is in a rebellious condition, and the moment food is taken irritation is produced, and vomiting quickly follows.

You must recollect, however, that there are other causes of dilatation of the stomach besides malignant disease of the pylorus, for it is necessary to have all these things in mind in studying the case. Sometimes the pylorus is obstructed and the stomach dilated from non-malignant thickening. At other times the pylorus may be obstructed from tumors outside of the organ pressing on it. There is no evidence of this in the present instance. The stomach is sometimes drawn down by adhesions, the displacement causing obstruction at this point. Occasionally, simple ulcers occur in the neighborhood of the pylorus, producing inflammatory thickening, which is followed by dilatation. There are one or two other causes of dilatation of the stomach of still more importance, such as chronic dyspepsia, connected with recurrent attacks of gastric catarrh. It is also possible in consequence of a debilitated habit, either from the general atrophy of the muscular tissues of the stomach, or from nervous paresis. I might in this connection allude to those rare cases in which acute dilatation of the stomach has occurred in a few days from paralysis of the splanchnic nerves following blows on the stomach. All these conditions can be easily excluded in this case.

How about the hemorrhage? The coffee-ground matter has been noticed only occasionally. In scirrhus of the pylorus —and cancers in this situation are usually scirrhous—there is simply a thickening beneath the mucous membrane; there is not often ulceration of the walls of the stomach, and when bleeding occurs it is generally due to venous congestion, the occasional rupture of a distended vein being the cause of blood appearing in the matters vomited. In the present case, the distention of the superficial abdominal veins points to obstruction of the deeper mesenteric circulation. In other forms of malignant disease, where the growth is fungous, covering a large portion of the wall of the stomach, the ulceration sometimes opens a blood-vessel, causing bleeding. Hemorrhage is, therefore, more frequent in other forms of malignant disease of the stomach than it is in the scirrhous variety.

This patient has had another prominent symptom, and that is constipation. This is a common symptom in cases of scirrhus of the pylorus. It is explained by the difficulty of food of a mixed character passing through the pylorus, and the necessity of living upon a liquid diet, which, although nutritious, yields but little waste. Wherever you find obstinate constipation, dyspepsia without cause, and loss of flesh, you may expect soon to see the final evidence of the affection in the appearance of a tumor.

There is another important matter to be considered in this case, and that is, whether or not there is secondary disease in any other organ. The organ to be examined most carefully is the liver, for, in about three out of four instances, cancer of the liver is secondary to cancer of the stomach. There is no pain over the liver, and the organ is not enlarged. We may, therefore, exclude malignant disease of this organ, for this is always accompanied with enlargement. Other points against the involvement of the liver are that there is no jaundice and there is absence of intestinal indigestion. This, added to the fact that the stools do not present the peculiar shiny appearance which is seen in affections of the pancreas, negatives disease of this viscus. Besides, there is no tumor lying across the abdomen in the position of the pancreas. We should, therefore, conclude that we have the disease probably limited to the pylorus, and that this has produced such obstruction as to be followed by great dilatation of the stomach. The rapid emaciation is dependent very largely upon the dilatation of the stomach and the inability to assimilate food.

When admitted to the hospital, the man said that he had been vomiting all the time. Under these circumstances, there were three things to be done. In the first place, we tried regulation of the diet. There are two kinds of food which might be suitable. We should, of course, begin with milk, as this is the most nutritious food that we can give. About two ounces of milk and lime-water should be given every hour and a half. Where this does not answer satisfactorily, the milk may be partially digested by adding three or four grains of pancreatine and ten grains of bicarbonate of sodium to a quart, allowing it to remain for about fifteen minutes at a

temperature of 80°. It should then be placed at a temperature of 40°. This arrests the process of fermentation and keeps the milk sweet until it is required. In this case it has not been necessary to digest the milk.

In some of these cases of dilatation it is necessary to suspend the administration of milk or starchy food, and to feed the patient exclusively on broths in small quantities. If these plans had not succeeded, we should have had to use certain medicines, and these are few in number. It might have been sufficient to use soda, or, what is better, bismuth, to obviate the acid condition of the stomach. Nitrate of silver may be used in conjunction with the bismuth with advantage. Ten grains of bismuth, with a pill of one-sixth of a grain of opium and one-twelfth of a grain of nitrate of silver, may be administered four times a day. The bismuth acts as an antacid, while the nitrate of silver and opium relieve the irritability of the gastric nerves. Where vomiting is due to gastric catarrh, nitrate of silver is also of direct service. In this case, however, there is no evidence of inflammation; there is no fever, and the tongue presents a healthy appearance.

Suppose, however, that bismuth and nitrate of silver were not sufficient to check the vomiting. In such a case the oxide of silver might be used in the same doses as the nitrate, and combined with one-tenth to one-eighth of a grain of extract of belladonna. The other remedies often used in vomiting, such as creasote and ipecac, would not be applicable to these cases. These are of special service in nervous vomiting. If these remedies failed, it would be necessary to wash out the stomach, and for this purpose there is nothing better than the tube of the Esmarch apparatus, used as a siphon. By washing out the stomach twice a week with warm water, or water containing an alkali, remarkable effects are sometimes obtained. In this case, as I have said, the simple measures adopted have been successful, and the treatment will, therefore, be continued.

The second case presented to-day I believe to be one of fibroid thickening of the œsophagus near the cardiac extremity of the stomach, producing obstruction. This patient's disease dates back about a year. A valuable negative point in the history is that he is under forty-two years of age. When a man past fifty presents the symptoms which I shall detail, they are more likely to be dependent on malignant disease than if the same symptoms appear earlier in life. A second negative point is that there is a good family history. A third negative point, that he has not been a drinking man. He has been a painter. The influence of occupation on the development of these troubles is, however, not very clear. The patient with cancer of the stomach whom I presented at the last lecture was a shoemaker, and had been in the habit of sitting with a board pressing against the abdomen. Whether this had anything to do with the development of the disease I cannot say.

Another negative point in the present case is that the patient has not lost much flesh, only about twenty-five pounds in eight months, and at one time there was a gain of seventeen pounds in five weeks. Patients with malignant disease do not usually gain, or, if they do, the rate is much less. The appearance of this man is that of a fairly-nourished individual, and there is no cachexia or evidence of tumor. The whole trouble centres around the difficulty of swallowing. Examination with the bougie shows that there is an obstruction near the cardiac end of the stomach.

The patient has told me that about twelve months ago the present symptoms appeared. He refers the difficulty to an attempt to swallow some ham in which was a piece of bone. At this time he felt a sensation of injury to the œsophagus. At all events, the difficulty in swallowing has continued ever since. At times he has been entirely unable to swallow, and at such periods it has been impossible to pass a bougie, but at intervals he can take milk, broths, and soft foods, and the bougie can be introduced through the obstruction. These facts seem to indicate that occasionally there is either an increase in the local process or that the parts become swollen or congested and therefore the lumen of the tube diminished.

The inferential probabilities drawn from the history in this instance are decidedly in favor of non-malignant disease, and it should also be remembered that malignant disease of the œsophagus usually is located near the point of the bifurcation of the bronchia. The prognosis is, of

course, much more favorable than that of malignant disease, but the resources of therapeutics are limited. The treatment will consist in the systematic use of the bougie. It shall not be employed too often, for it might increase the irritation. Once or twice a week will probably be sufficient. This treatment has been followed thus far, and also a course of belladonna and mercurials. If the obstruction were ever to become absolute, the operation of gastrostomy might be considered.

ORIGINAL COMMUNICATIONS.

REMINISCENCES OF THE CHOLERA EPIDEMIC OF 1832.

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AS we are having reports that the Asiatic cholera now prevails in France, and judging from former experiences that it will probably visit this country before another year shall have passed away, it has occurred to me that some reminiscences of the disease as it prevailed here in 1832 may be interesting to those of our profession who have graduated since that time.

During the years 1830 and 1831 reports reached us that the disease was steadily advancing from Asia to Europe and across that country, and that it would doubtless reach America in its westward progress. We were informed, too, of its great fatality; yet it produced no great anxiety among physicians here, and none at all, apparently, among the people of our cities until it actually appeared in Canada. About the 1st of June, 1832, a Dutch ship arrived at Quebec, and on the 8th the disease appeared among the crew. It spread over the city with great rapidity, proving fatal to about two-thirds of all who were attacked. In two days (the 10th of June) it reached Montreal, distant one hundred and eighty miles. Here, as in Quebec, it spread rapidly, the deaths in three or four days being from 100 to 150 daily, though the population was only 25,000. The excitement in our cities became intense. In Philadelphia a meeting of physicians was called to take the subject under consideration, which resulted in the appointment of a committee of three or more to visit Quebec and Montreal to see the sick and confer with physicians there in relation to treatment. Professor Samuel Jackson, of the University of Pennsylvania, Dr. D. Francis Condie, and others, whom I have forgotten, composed the commission. While they are away on their mission of mercy, we will follow the disease as it sped from city to city and spread throughout the country. From Montreal it passed rapidly along the river to the towns bordering it,—to Lake Ontario, thence to Lake Erie, on to Detroit, then by Lake Superior to the Mississippi and Missouri Rivers, seeming to prefer this great watercourse, though striking small towns and country places on either side along its borders many miles from its shores. The disease as it reached us, however, does not seem to have come from that direction.

It first showed itself in New York on June 24, and twelve days afterwards, in that city of 200,000 people, the daily mortality had not reached 20. The marked difference between its mortality there and in Montreal was doubtless owing to the thorough cleansing which the former city underwent after the appearance of the disease at Quebec, and to the universal avoidance of all supposed exciting causes.

It did not occur in Albany at that time, the great half-way house between Montreal and New York, until five or six days after its appearance at the latter place.

Of its appearance in Philadelphia and in our county I have in my diary, from which much of the above has been condensed, the following:

"July 20.—The disease appeared in Philadelphia on the 5th of July, in a man named Musgrave, in Filbert Street, near Schuylkill Third Street [now Twentieth Street], and a few days later two men in a house in Coates Street [now Fairmount Avenue] were attacked.

"Now, nearly every case of disease to which I am called is of the stomach and bowels,—griping, frequent purging of watery stools, and vomiting. Yesterday I was called to a case of cholera morbus of our usual kind, and to-day to two cases in one house; but in Philadelphia there are, it is said, 4 or 5 cases of real Asiatic cholera. In New York from 100 to 150 cases occur daily, with from 50 to 70 deaths.

"In Quebec and Montreal the disease is subsiding rapidly, for the *Montreal Gazette* of July 7 says, 'The disease may now, after being with us thirty-eight days, be said to have left us, the deaths yesterday

from cholera being but seven,—not an unusual number for this season of the year.'"

"July 21.—During last week several cases occurred in New Jersey at great distances from each other. In one family of 5 persons, in a country place, 4 of them died in a few hours. (Newspaper report.)

"There has been no case reported in Philadelphia for three days past, and it is believed by some physicians that the cases previously reported were only cholera morbus."

"July 22.—Last Friday, 20th, there were 213 cases in New York, and 100 deaths. The disease has increased rapidly there during the past seven days.

"It is supposed that at least one-third of the inhabitants of the city have already left it for the country.

"Three hundred *women of the town* came from there to Philadelphia in the steamboat yesterday, and between two and three hundred a few days ago. (Fortunate Philadelphia!)

"Nearly all the small towns on the main route from New York to Philadelphia have been attacked during the past week.

"I was called, a few hours since, to a case of what I choose to call cholera morbus, in which there were severe cramps of the limbs, a symptom which I have not encountered in the cholera morbus of other years."

Readers of the *Times* must bear in mind that, at the time of which I speak, the communication between New York and Philadelphia was by one daily stage across New Jersey. It was often several days after events occurred there before we heard of them here: so my account of the progress made by the cholera there could not be recorded day by day, but it is, so far as it goes, mainly correct, and, as it may be interesting to know how rapidly and regularly it reached its height and declined, I give the following tables as they appeared at that time in the Health Reports of the two cities. In New York, up to July 22, 1600 persons had suffered from the cholera, 700 of whom had died.

July	23,	New Cases,	231;	Deaths,	73
"	24,	"	"	296	"	96
"	25,	"	"	157	"	61
"	26,	"	"	141	"	55
"	27,	"	"	122	"	46
"	28,	"	"	145	"	68
"	29,	"	"	122	"	38
July	30,	New Cases,	103;	Deaths,	38
"	31,	"	"	121	"	49
August	1,	"	"	92	"	41
"	2,	"	"	81	"	34
"	3,	"	"	90	"	24
"	4,	"	"	38	"	30
"	5,	"	"	96	"	29
"	6,	"	"	101	"	37
"	7,	"	"	89	"	32
"	8,	"	"	82	"	22
"	9,	"	"	73	"	28
"	10,	"	"	97	"	26
"	11,	"	"	76	"	33
"	12,	"	"	67	"	23
"	13,	"	"	105	"	23

This account, to the 13th of August, gives the number of seizures in New York as 4348, with 2756 deaths. The complete account, made after the disease had passed away, gave the seizures as 5381, with 2117 deaths during its continuance there.

This shows a milder disease or better treatment in New York than in Montreal, for New York was about eight times larger than Montreal, and yet at the latter place as many as 140 died in a single day, that being reached only once in the former city.

Philadelphia fared still better than either of the cities yet named. Although the first case was on July 5, yet until the 15th there were only 5 or 6 cases reported by the Board of Health, and from that time no report of any till the 28th of July, when they occurred as follows:

July	29,	New Cases,	6;	Deaths,	1
"	30,	"	"	15	"	7
"	31,	"	"	19	"	9
August	1,	"	"	20	"	9
"	2,	"	"	40	"	15
"	3,	"	"	35	"	14
"	4,	"	"	47	"	13
"	5,	"	"	125	"	43
"	6,	"	"	176	"	74
"	7,	"	"	137	"	73
"	8,	"	"	114	"	46
"	9,	"	"	154	"	58
"	10,	"	"	142	"	39
"	11,	"	"	126	"	33
"	12,	"	"	110	"	31
"	13,	"	"	130	"	49

My record ends with this date, and I give it here merely to show how it increased and diminished. Dr. Jackson, in his paper, made after ample time had elapsed for an accurate account, gives the population as 160,000, the seizures as 2314, deaths, 935. The cases were found in every part of the city. I have already spoken of the first case: the second and third were remote from it, in the Northern

Liberties, on July 9; in a few days, two more, near the last; then one away in Kensington, two miles from the first case; then a few scattered cases, until the 27th and 28th of July, when the epidemic swept on in full force.

In private practice there were 1175 cases, with 270 deaths; in hospitals, 874 cases and 342 deaths; in the old Almshouse, 174 cases and 92 deaths; in Arch Street Prison, 86 cases and 42 deaths.

Southwark and Northern Liberties, the suburbs nearly equidistant from Market Street, suffered nearly the same, while the city proper (not counting the old Almshouse and Arch Street Prison) was not so severely afflicted. In the first few cases which occurred, no communication could be traced to infected persons or districts.

Let us now return to New York, and see how the disease was brought there. On a close examination of this subject may depend our decision in relation to the value of quarantine measures. Sixteen days passed from its appearance in Quebec until it was found in New York, and before a single case occurred in the four hundred and fifty miles of country between the two places. Even Albany, the great resting-place for travellers, both by land and water, from Canada to New York, was still free from it when New York's first case occurred, in one of the old inhabitants, exempt from intercourse with the business people. Then three days more elapsed—nineteen days after its appearance in Montreal—before the second case occurred, in an old woman, an inmate of the Bellevue Almshouse, three miles from the city, who had been confined in the house for three years, and there was no possibility of tracing its immediate origin. From the Canadian cities it seemed to pass up the great lakes, and not down through the land-routes to the New England cities. Nearly all the towns on the seaboard from the St. Lawrence to Cape May were exempt. Except in very few cases, which occurred in Boston, Newport, New Haven, and Providence, all New England seemed to escape. The cases in Bellevue Almshouse were 530, with 298 deaths.

The following table, taken from Dr. Jackson's report (page 292 of the *American Journal of the Medical Sciences*, February, 1833), may be interesting:

	Population.	Cases.	Deaths.
Quebec,	32,000	5783	2118
Montreal,	28,000	4420	1904
New York,	140,000	5814	2935
Philadelphia,	160,000	2314	935

The disease, as already stated, did not occur in Albany for nearly a week after it appeared in New York. In all the places spoken of, the largest number of patients were found among the laboring poor, the intemperate, and those broken with toil, poverty, and distress.

By the time the Philadelphia Board of Health made its second report (July 28), the whole country was excited, and, as the bowel-affections incident to the season were evidently of a more active and severe kind than usual, we of the country were on the lookout for the dreaded visitant. In all the cities named, before the real Asiatic cholera occurred, there was a general prevalence of bowel-affections, from which comparatively few escaped. It was not uncommon to have, in addition to the diarrhœa, cramps and a sense of fatigue and tension in the calves of the legs.

During this time it was evident that we were here, at my home (fourteen miles from the centre of the city), feeling the approaches of the disease. On July 19 I had two severe cases of what I called cholera morbus,—fair specimens of cholerine, as given by Prof. Jackson; July 20, one case; July 22, one case; July 24 and 27, each one case. They were violent cases, attended by cramps of the legs in addition to the common symptoms; and, though we knew nothing of germs and germicides, had not heard of Pasteur or Koch, were ignorant of heart-clot, embolism, and septicæmia, they were all speedily cured by the use of calomel, and opium and camphor, aided by external irritants and fomentations, in some cases preceded by venesection. Lest my readers should be disgusted by the mere mention of this last-named means of cure, I will say more about it before I finish.

The situation was becoming serious. Exaggerated reports of its progress and fatality were passed from mouth to mouth, and doctors were appealed to for advice and encouragement. At that time, even here, on the very border of Philadelphia County, physicians were far apart. Each one of us had a large area of country, in which almost every family depended upon

his knowledge, skill, and faithfulness to duty. Much as we had desired and sought information in relation to the disease and its treatment during the two years in which its coming was heralded, we had learned but little concerning it. As the Commission had returned from Canada, and two of the most eminent physicians of Philadelphia—Dr. Joseph Parrish and Prof. Samuel Jackson, of the University of Pennsylvania—had established hospitals for the reception of patients, and as the cases coming to me almost daily gave evidence that we were within the range of the epidemic's influence, it seemed to me to be my duty to go to Philadelphia and see what treatment was in vogue there: so on the 31st of July a visit was made to the hospital of Dr. Parrish. His room was in Church Alley, between Front and Second and Arch and Market Streets. His son, Dr. Isaac Parrish, told me that they had begun a few days before with the cooling treatment,—washing the body with cold spirits, and giving ice or iced water to allay the insufferable demand for cold drink. But, as the patients had been brought in from the streets when far advanced, all their remedies had been in several cases of no avail. The two patients then before us were in a hopeless condition. They had been in there only since the night before. I had seen men exceedingly ill with cholera morbus, but had no conception before of the appearance of one in the deep collapse of Asiatic cholera. There they lay, cold and clammy all over the body, eyes sunken, pulseless, voice sunk to a whisper, body wasted and shrunken to a frightful degree, and, like the lips, of a blue tinge.

Dr. Jackson had pursued an opposite course,—had stimulated his patients and externally had used hot vapor steam-baths. He had been as unsuccessful as Dr. Parrish. Both of these eminent men soon fell back on their previous knowledge of the action of medicines and their experience in the treatment of affections of the bowels, especially cholera morbus, which has so close kinship with Asiatic cholera, and were afterwards very successful.

Having thus traced it from city to city, or rather its appearance at various places, for thus far it does not appear to have been introduced by any means which a strict quarantine could have prevented, let us see in what way it spread to country places. No words of mine can give an adequate idea of the panic which prevailed at that time in city and country. People fled from the city as best they could,—by the few stages which then passed to and fro from country towns, by boats which did the carrying-trade on the Schuylkill and Delaware Rivers, and by wagons of farmers returning from market. When in Philadelphia, no one had spoken to me with confidence in any plan of treatment, and I returned to my home with a feeling of great responsibility and a deep conviction that I was poorly qualified for the earnest duties likely to come before me. On the 4th of August a severe cholera morbus occurred in a woman 60 years of age; and on the 5th, one of Asiatic cholera. I called it *that*, because of the profuse discharges of rice-water, the vomiting and cramps of body and limbs, corrugated skin, and cold, clammy surface. The same day I had another case, one mile from the former, in a woman who had not been from her home for a long time, but they were all within a mile of the river. August 7, was called to see a group of Irishmen engaged in digging a canal at Conshohocken, at a place where there were then only a few houses for laboring men, besides the farm-house and barn of Mr. Harry. In this barn I found several men in a sad condition. One was dying, some were drunk, and some evidently quite sick, as well as under the influence of whiskey. I attended pretty faithfully to them for a few days, but, as there was no nurse, and as the thirst of the sick was so great as to cause them to take water every few minutes, to be vomited as soon as taken, my ministrations did no good. One day when I arrived, a dying man told me that when he would ask for water one drunken fellow would dash it on him from a bucket. Three of them died in a few days, and I prevailed on the others to go away. They seemed to be well, but were drinking very much of whiskey. The next day they were all away. Whether I did right in advising them to separate has been to me, ever since, an unsolved problem. The next day, or the day after they left the barn, Dr. Roger Davis, who lived in a very out-of-the-way place, five miles from Norristown, found a sick man on his piazza early in the morning. He wanted medicine, but had waited several hours for the doctor to get up, and by that time was so ill that he could not

travel farther. Dr. Davis made him as comfortable as he could in the barn, but he died in less than twenty-four hours. Dr. Davis had not the least suspicion of anything but cholera morbus. Next day he, Dr. Davis, was sick, and the day after, very sick. A physician saw him, but he was then in a profound collapse, and died a few hours afterwards. The man who had died there reported that he had come from Conshohocken, was one of the group spoken of, and that he had been taken sick a few hours after leaving there, while walking up the river. If it came to Dr. Davis from that man, it would favor the belief in a peculiar poison—germ, shall I say?—which acts very quickly. From this time, August 12, until September 22, it spread over the region in which I practised, giving me twenty-eight more cases, all of whom recovered but two, of whom I will give brief accounts.

N. Leonard, between 40 and 50 years of age, a vigorous man, in good health, living opposite Conshohocken, close to the side of the river, was troubled with diarrhœa and occasional vomiting from the early morning of August 11 (only four days from my first visit to the sick men in the barn, a quarter of a mile away, on the opposite side of the river) until 4 P.M., but he had not kept in the house, nor had he felt that it was a serious illness until at the hour named, when the cramps appeared. At seven o'clock, when I saw him, he was still sitting up, though having cramps, and very often vomiting and purging of that peculiar fluid since known everywhere as "rice-water discharges;" pulse was small, frequent, his voice becoming husky, and his skin perspiring profusely. I attempted to give him my cholera morbus treatment,—salt-water emetic, camphor and opium, calomel, and, externally, frictions and warmth; cold drinks, and ice in small lumps. Here I ought to say that after Dr. Jackson's failure with the hot vapor, and which failed with others also in their small hospitals, he had hollow tin vessels made to fit the thighs, legs, arms, and body, which being filled with hot water were applied. I used these on my poor patient, to check, if possible, his profuse cold perspiration. My efforts for hours were of no avail. I sent miles away for an old physician, who, on being told of the ailment, would not come; then for my brother, Dr. William Corson, of Norristown, with only a year's practice. He came at midnight. All my efforts had been of no avail. Medicine taken by the mouth was quickly rejected, the watery discharges so copious that the bed was thoroughly soaked and they ran through it to the floor. To those who have never seen such a case, a truthful statement of the amount would be deemed incredible. I speak of it as gallons. Dr. Jackson said he had seen bucketfuls discharged in a few hours from the bowels alone. It was then midnight; the pulse was barely perceptible, the voice had sunk to a whisper, the skin was wet, and cold as the body of the dead, but the mind clear. In this case, as in others in collapse which I saw later, there seemed to be no anxiety about the result, no fear or care about it, save to have relief from cramps. The suffering was fearful: though all we could do we did. Frictions, and the tourniquet to the limbs, were somewhat relieving to the cramps there; but for those in the muscles of the chest and belly—great hard balls, which caused faint cries of agony—we could do nothing. We stood by him hour after hour, and when the morning dawned the night and the patient passed away together. How helpless we had been to relieve! how confused and uncertain as to the proper course to pursue! —the patient in fearful agony from cramps of the muscles of the legs, the belly, and the chest, his skin cold as the dead, even his tongue cold, and yet oppressed with a sense of heat all over his body, and crying for water! water! water! With the clinical thermometer to determine the temperature, and the hypodermic syringe to put anodynes where they would certainly exert their power, we could now have no excuse for allowing a patient's last hours to be so agonizing.

From that time cases followed each other rapidly until the 6th of September, when one, also speedily fatal, occurred, which was so like the one already given that I would not refer to it, save to show the exciting cause.

Samuel Summers, a strong young man, accustomed to work for the farmers, after working all day September 5, went to a "watermelon party," and stayed till midnight, dancing occasionally: next morning was at work at sunrise, as was then the custom. When called to breakfast at seven o'clock, he felt sick, and did not go. In a short time—even before his fellow-workman finished eating—he went home, a distance of only one-eighth of a mile, vomited, had much pain, and copious thin discharges from the bowels. He was several miles from me, so that I did not see him till 10 A.M. Found him then, only two hours after his first feeling pain and nausea, having copious rice-water discharges, much sickness of stomach, vomiting, and strong cramps of the limbs, pulse small, perspiring greatly. He was already passing into collapse. Although I called two other physicians to aid me, one of whom was a man of long practice, it was all to no purpose. I did not leave him till he died, at 10 P.M.

It was just such imprudence as this—

indulgence in watermelons, and loss of a night's sleep—that brought on many cases. There had been no case in that region before his, and the people there had not been greatly alarmed. All my cases, except those above named, thirty in number, got well, but they had not passed beyond the second stage; many of them had severe vomiting, profuse purging, and cramps of the legs, but they were vigorous, fearful of death,—a most encouraging sign to me,—and could bear venesection if deemed necessary. If the pulse was yet unaffected and cramps present, I resorted to it, then gave "Dr. Parrish's Camphor Mixture," or camphor and laudanum, with ice or iced water to allay the fearful thirst; also used mustard externally, or, where the surface was cold, with clammy and shrivelled skin, hot water was used in the tin vessels as recommended by Dr. Jackson. Calomel was given in many cases, for no other reason, I suppose, than that it was believed to be efficient in causing a flow of bile, and that the presence of bile in the stools was regarded as a favorable indication.

Though all whom I attended got well, save those named, I feel that one more experienced in the treatment of disease than I then was might possibly have saved both Leonard and Summers, for Dr. Jackson reports cases which were in a seemingly worse condition when he was called, some of whom recovered, though his means of cure were the same as mine.

Let us hope that the lapse of fifty-two years has given us better means of relief if we should be again called on to confront the disease. Though Drs. Parrish, Jackson, and their followers differed greatly from Dr. Hodge and some others about the pathology of the affection, their treatment was nearly the same. Listening to the crude theories which were sent forth by persons who had never seen a case, but who fancied that it was something pathologically different from any disease they had ever seen before, and acting on these theories, the first few cases were fatal in almost every hospital; but when, more familiar with it, they attended to the symptoms and applied their successful experience for their relief, all of them proved to be fairly fortunate in saving lives. The fatality in Philadelphia was one death to two and a half persons attacked, while in New York it was one to two.

In a subsequent communication I propose to refer particularly to the various methods of treatment then employed,—the use of calomel, venesection, leeches, emetics,—at first so popular,—cathartics, hot vapor-baths, dry heat, ice externally and internally, which were approved by the experience of leading physicians who were engaged in active practice at the time this epidemic under consideration prevailed in Philadelphia.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,

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DISEASES OF THE ORGAN OF HEARING OCCURRING IN TYPHOID FEVER.

DR. FRIEDRICH BEZOLD, of Munich, has written a very interesting and valuable paper on this subject in the *Archiv für Ohrenheilkunde*, vol. xxi. part 1.

Between 1876 and 1880, Dr. Bezold observed fifty cases of aural disease occurring in twelve hundred and forty-three cases of typhoid fever. In this list of ear diseases, those of purely nervous origin are not considered, for reasons yet to be given.

The fifty cases of ear disease observed and recorded were all due to inflammatory changes in the middle ear. In some of these the internal or the external ear was implicated secondarily. Otorrhœa due to primary disease in the auditory canal was not found: it was always due to previous inflammation in the middle ear.

There are three forms of disease of the ear which occur in the course of typhoid fever:

1. Hardness of hearing without inflammatory manifestations, and without any objective alteration in the membrana tympani and in the middle ear: this alteration in function may be due to central changes.

2. Closure of the Eustachian tube, with consequent retraction of the membrana tympani.

3. Purulent inflammation of the middle ear cavities: (*a*) without perforation of the membrana; (*b*) with perforation of the membrana, and otorrhœa,—*i.e.*, otitis media purulenta acuta.

I. In the first class the cause of the hardness of hearing is not clearly demonstrable. It is doubtful whether these forms are to be regarded as the result of a typhoid suppurative destruction of the

fenestra, with a consecutive suppuration in the labyrinth, or whether it is to be supposed that they are due to an independent purulent process in the labyrinth analogous to that which seems to occur in cerebro-spinal meningitis.

The ear may be secondarily affected in typhoid fever by purulent parotitis which discharges through the auditory canal. This rupture into the canal is said to occur usually at the junction of the cartilaginous with the osseous canal.

The first class named above, the so-called nervous form of deafness, is characterized entirely by subjective symptoms, variable deafness of a moderate degree, and tinnitus aurium. But the nervous forms of ear disease in typhoid fever are not counted in the fifty cases of ear disease observed by Dr. Bezold, because the slight deafness could not be properly measured in the wards of a hospital, and also because this form of deafness occurs in those cases in which the nervous phenomena generally are very prominent, and uncertainty would attend all examinations of the ear. Furthermore, it is desirable to let such cases alone. This form of disease of the ear in typhoid fever has been observed by Dr. Bezold in private practice, and it is seen that in some instances there is a restitution of the hearing with the disappearance of the fever.

It is not, however, the province of the aurist to collect the large number of observations of the onset, the grade, and the frequency of these purely nervous disturbances of the organ of hearing in typhoid fever, which are demanded for the proper prosecution of the study of the course of the affection from the beginning. This falls to the duty of the clinician.

II. The second form of aural disease which may occur in typhoid fever—viz., closure of the Eustachian tube, with consecutive manifestations in the membrana tympani—occurred only in two instances in the fifty cases of ear disease observed by Bezold, and then once it occurred during convalescence. This is contrary to the general supposition that closure of the tube often occurs in typhoid fever.

III. By far the most frequent and most important complication which befalls the ear in typhoid fever is the third form named in the table already given,—viz., acute inflammation of the middle ear,—which, in the majority of the cases, leads to perforation of the membrana tympani and chronic otorrhœa. In twelve hundred and forty-three cases of typhoid fever, acute otitis media was observed forty-eight times,—*i.e.*, in nearly four per cent. of the cases. Forty-one of these cases terminated in perforation of the drum-membrane,—*i.e.*, 3.3 per cent. of all cases of typhoid fever.

In contradistinction from the nervous affections of the ear, which appear early in the disease, even as prodromes, the inflammatory processes in the middle ear do not appear until near the end of the general malady. They occurred, on the average, between the twenty-fifth and the thirty-fifth day of the disease. Only in three cases did they occur before the twentieth day,—viz., on the ninth, the thirteenth, and the seventeenth day.

The course of the otitis media acuta, according to the observation of the forty-eight cases alluded to, is as follows: (*a*) The lighter forms, which run their course without perforation of the membrana tympani. Generally nearer the end than the beginning of the disease, moderate and intermittent pain is felt in the ear, with slight hardness of hearing; the latter may increase considerably during the further course of the disease. The membrana tympani is at first slightly, later on considerably, injected, chiefly in its upper and posterior quadrants. The injection, following the vessels of the manubrium mallei, reaches finally to the umbo and the hinder periphery of the membrana, so that its boundaries with the auditory canal above and behind become very indistinct, especially since an inflammatory infiltration of the cutis of the latter is generally present. The remaining uninjected parts of the membrana have a dull, grayish-white appearance. This condition may persist for several weeks, inflation having no effect in bettering the hearing, as it has in ordinary cases of tubal affections. Spontaneously, at last, the ear seems to resume its functions. This form, then, manifests in general the clinical character of acute catarrh of the middle ear. A post-mortem examination of such a case reveals that the secretion in the middle ear, even in these lighter cases of inflammation in the course of typhoid fever, is, from the outset, purulent.

(*b*) Otitis media purulenta acuta, with perforation of the membrana tympani.

This form of aural disease was observed thirty-six times on one side and five times on both sides. Its onset, which usually occurred in the fourth or fifth week of the general disease, resembles in character the previously described form. All the inflammatory symptoms are, however, more pronounced. The congestion of the membrana tympani extends to the osseous wall of the auditory canal, is intense, and produces with the coexistent swelling of both parts a complete disappearance of the upper and posterior boundaries of the membrana tympani. From the beginning there is usually felt a pulsating tinnitus; the pain in the ear is great, and throbbing in character: comparatively frequently, even in the beginning of the disease, there is found a marked sensitiveness to pressure in the mastoid region, directly behind the auricle. As a rule, there is, at the outset, fever with a temperature varying from 37.8° to 40.5° C. If paracentesis is not performed, in a day or two a spontaneous rupture of the drum-membrane ensues. The discharge is usually copious, and is either serous or sero-sanguinolent, with an admixture of flocculent pus, from the beginning. The general inflammatory symptoms grow milder after the opening of the drum-membrane, but do not entirely cease. After the discharge is fully established, the maceration of the membrana and adjacent parts in the auditory canal becomes so intense as to hide the seat of disease from view. It is worthy of note that in these cases of aural disease in typhoid fever the perforation, instead of being in the anterior inferior quadrant, is found in the posterior half of the membrane, and rarely under the umbo. Its form is round, and its size is about that of a lentil. This may be due to the recumbent posture of the typhoid patient, and the gravitation of the purulent contents of the tympanic cavity to the posterior parts of the ear. Dr. Bezold also suggests, besides this explanation, that the position of the perforation may depend directly upon the locality of the inflammatory process in the drum-cavity. Since the chief seat of the inflammation in these cases is in the posterior parts of the drum-cavity and in the mastoid cells, the perforation in the membrana probably ensues in that portion most contiguous to the seat of the inflammatory process.

The discharge gradually loses its sero-sanguinolent character and becomes in a few days muco-purulent, without increasing in quantity. It may continue in this form with varying quantities for several weeks or even months, without being affected by the most careful antiseptic treatment by means of boracic acid. The intensity of the inflammation may be so great as to lead to the formation of a red and exuberant polypus occupying one-half of the entire auditory canal, and which will require evulsion by means of the wire snare.

In some instances, during the suppurative process in the ear, instead of the usually intensely reddened mucous membrane in the drum-cavity, there may be seen through the perforation a whitened membrane which is strongly suggestive of a diphtheritic affection.

Typhoid otorrhœa is characterized by the frequent and intense participation of the mastoid in the inflammatory process. In forty-one cases it was noted by Bezold nineteen times, in eleven of which it manifested itself at the beginning of the aural disease, and in the other eight cases the time of its onset varied between the second and twelfth day. The pathological investigations in cases of this character enable the writer to say that, besides the drum-cavity, the mastoid antrum and the neighboring mastoid cells participate largely in the purulent inflammation arising in typhoid fever. Very often tenderness in the mastoid is one of the earliest symptoms and precedes the perforation of the membrana tympani. The presence and degree of tenderness to pressure in the region of the mastoid antrum forms, according to our author, the surest measure of the intensity, and hence of the duration, of the inflammation in the middle ear. This tenderness may continue with variations for several weeks, and then suddenly increase and lead to suppuration in the external periosteum of the mastoid, finally necessitating an incision. In five instances of the nineteen above named, suppuration thus occurred between the bone and the periosteum, and Wilde's incision was performed.

The variability of the temperature in these cases resembles that in pyæmia. The deafness also shows peculiarities in the purulent otitis media of typhoid fever. Thus, after eleven days of suppuration on one side and violent symptoms of inflammation on the other for two days, with

involvement of the mastoid cells, the deafness may become so intense that loud speech cannot be heard at all, and the tuning-fork is perceived only immediately in front of the auricle. This absolute deafness for speech continued in one case for nineteen days. Subsequently the right ear became normal after the subsidence of the inflammatory process. The condition of the left ear could not be watched until recovery had been complete, as the patient left the hospital. Such marked impairment of hearing is never observed in ordinary acute purulent inflammation of the middle ear. It is supposed that the labyrinth is involved in these instances of profound deafness in typhoid otitis purulenta.

The duration of typhoid otitis media purulenta is usually longer than that of spontaneous or sthenic otitis media, but, notwithstanding the accompanying inflammation of the mastoid cells, it does not manifest the destructive character of purulent otitis of scarlet fever or of phthisis. In those cases which can be observed until entire recovery takes place, it is found that the perforation in the membrana closes and the hearing becomes nearly normal.

Treatment.—Since 1878, Dr. Bezold has pursued the antiseptic treatment by means of boric acid, and, although he does not observe the great controlling influence over the amount of muco-purulent secretion in the middle ear he once was inclined to claim for it from the favorable course of the first cases thus treated, the antiseptic treatment by means of boric acid is considered by him indispensable in the treatment not only of chronic but also of acute suppurative otitides. This form of antiseptic treatment prevents decomposition and secondary inflammation of the canal.

The ear also shows no tendency to inflammatory reaction from the treatment by this means, whereas, before the days of antiseptic treatment, simple warm-water injection into the ear in ordinary cases of acute inflammation of the drum-cavity would be followed by inflammatory narrowing of the canal, lymphangitis in the retro-maxillary fossa, and erysipelatous tumefaction of all the parts surrounding the ear. Granulations, should they not yield to the treatment by boric acid, which they usually do, are to be combated by touching with nitrate of silver. Should polypi be developed, they must be extracted by means of the wire snare.

The great tenderness in the mastoid, usually manifested from the outset of the aural complication, was treated by local blood-letting and partly by continuous cold applications and iodine. The most positive, if not the most enduring, relief was afforded by the local depletion. In five instances paracentesis membranæ tympani was performed before the spontaneous rupture of the membrane occurred. Wilde's incision, which was required five times on account of swelling of the mastoid with suppuration beneath the periosteum, was performed, with one exception, at the posterior line of attachment of the auricle. Three times the bone was found denuded to a small extent, and a communication existed between the outer table and the mastoid cells, so that a probe could be inserted from one to four centimetres into the mastoid cavity. After the opening was thus made behind the ear, the suppuration from the canal quickly ceased, and the perforation thus made usually closed in from a few days to a few weeks, so that an operative extension of the opening in the bone was not rendered necessary. In one case a sequester was thrown off. In another instance, Dr. Bezold believes that the suppuration in the middle ear extended to the mastoid cavity by the way of the incisura mastoidea. The pus was retained beneath the cellular tissue of the outer mastoid surface, where it was finally absorbed.

Pathology.—Dr. Bezold then gives a detailed account of six post-mortem examinations of the temporal bones of those typhoid cases affected with profound aural inflammation. He also made sixteen post-mortem examinations of the ear in those who had died of typhoid fever, but in whom there had been no aural symptoms. He found in the latter class, six times glairy mucus in the Eustachian tube, and four times secretion in the drum-cavity,—viz., once of a glairy nature, once serous, once muco-purulent, and once purulent. In a third series, a slight hyperæmia of the mucous membrane of the tympanic cavity was observed in two instances; in a fourth, there were found three cases of infiltration of the mucous membrane of the drum-cavity; and in a fifth class there was found infiltration and extravasation of blood at a circumscribed area in the mas-

toid cells, in one case. In a sixth set, extravasation of blood was found in the membrana tympani in two cases, while in a seventh series, perforation of the membrana tympani was found twice, probably the result of an inflammatory process previous to the typhoid fever. In an eighth class are placed the only two cases in which nothing abnormal was observed in the ear.

Etiology.—The reason given for the occurrence of acute purulent inflammation in typhoid fever is the diminished power of resistance of an organism under the influence of typhoid disease or of any acute infectious disease. This sensitiveness of the typhoid subject is shown in the ready occurrence of malignant œdema from a subcutaneous injection of musk, which is borne very well in other diseases.

Dr. Bezold finally presents the possible explanations for the occurrence of the purulent form of otitis media in typhoid fever:

1. Direct propagation of the inflammation through the Eustachian tube, although simple closure of the tube can, in all probability, be excluded as a causation of the purulent process in the ear.

2. The accidental introduction of septic material into the drum-cavity,—viz., decomposed secretions in the nasal cavities by the act of nose-blowing on the part of the patient.

3. Emboli in the mucous membrane of the middle ear, originating in either an endocarditis and thrombi of the left side of the heart, or from purulent foci in the periphery of the system.

It is supposable that during the height of the typhoid disease some of the secretions remain in the naso-pharynx, which part, as a rule, is affected in typhoid fever by swelling and infiltration, and, according to Hoffmann, sometimes by diphtheritic processes. These secretions undergo decomposition, and, in the endeavors at removal, a blowing of the nose may force some particles of this matter into the middle ear, and even into the mastoid cavity.

The presence of such irritants in the cavity of the drum is resented by it very much as the peritoneum would react against such intrusions.

A second explanation of the occurrence of inflammatory reaction in the middle ear in typhoid fever is that it is due to embolism. Small emboli in the mucous membrane of the middle ear have been demonstrated by Trautmann, and such agents may cause purulent processes in the ear during typhoid fever.

REMARKS UPON A CERTAIN CLASS OF THE INSANE.

BY HENRY M. WETHERILL, M.D.,

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A GENTLEMAN prominent in the management of some of our most worthy charitable institutions directed my attention to the fact that, while those of the insane who are confined in hospitals and asylums are protected by stringent laws and are subject to periodical visitation and inspection by officers of the commonwealth, there is yet another class who are left often without any protection against ignorance, prejudice, neglect, and cruelty. These are the insane who are detained and treated in their homes, and it is of them and of their rights that I wish to say a few words.

This lunacy law of 1883 demands the registration, the licensing, and the official visiting of all houses where more than one insane person is detained, provided that compensation is received for the detention and care of such person, and further enacts that the same benefits be extended to the insane inmates of houses where more than one of such is detained, whether compensation is received or not. The first clause protects the insane in asylums, or those who have recovered from attacks of mental disease, from becoming the victims of a money-getting rapacity; the second clause covers the indigent insane of our almshouses and State asylums.

This new law contemplates the protection merely of collections or congregations of these unhappy members of society, without taking cognizance of a vast number of individual cases left to the mercy of a variety of circumstances and contingencies. These need the benefits of wise and humane legislation to, at least, an equal extent with the others. The individual unfortunate detained at home is subject to sources of wrong and to elements of danger to himself and others to which the inmate of a respectable asylum is almost a stranger.

The new law, in order to do the most possible good, should have covered the

entire ground, and demanded, in addition, the registration and visitation, but not the licensing, of all houses where one insane person is detained, thus bringing under its influence a class of insane who require supervision.

The respectable charities of the State have cheerfully shouldered the burden of additional expense and trouble incurred in obedience to the requirements of the law, not because their patients needed its protection, nor because they had anything to learn at the hands of these law-makers, but because there were those among them who were not single-hearted or clean-handed in the care of this most helpless portion of our community, and all had to be brought to one common level of subordination, so that the evil might be stamped down. Now, if boards of control, managers of charities, bodies of respectable members of society, do not refuse to be at expense and inconvenience for the public good, why should families or individuals consider the registration and visitation of their insane by competent legal officers an infringement of their liberties? There is a certain small proportion of the insane now detained in some asylums who would be quite as safe and more comfortable were they cared for at home; but, on the other hand, the great majority of those detained at home would be happier and safer as inmates of well-regulated asylums. The insane person detained at his home is more often the victim of ignorance than of wilful neglect or cruelty: a bare, uninteresting apartment is allotted to his use, in which most of his time is passed, in the company of an attendant who is very unfit to be his sole companion, even though he may be physically competent. The patient suffers from lack of fresh air and exercise, and keenly feels the need of social intercourse, amusement, and recreation. He is deprived of much that he might otherwise enjoy, in order that it shall not be known that there is "insanity in the family." Could anything better prove that it is there? When was this secret ever kept? If he happens to be suicidal, homicidal, or a pyromaniac, he is a constant source of danger to himself and others.

Such lunatics, goaded to rage or rendered melancholy by their cramped, unnatural lives, frequently escape and commit suicidal or other acts of violence. One has only to read the papers to have the truth of this statement illustrated. Should such a one happen to have a brutal attendant, they continue to mutually brutalize each other in secret until a domestic tragedy reveals, sooner or later, a course of wrong-doing and wrong-enduring.

There are those, again, who are cared for at their homes and treated as members of the family, who are allowed to wander about unattended, daily exposing themselves to danger, insult, and injury, and their friends to the reproach of negligence. This is the other extreme, and involves the patient in almost as great risk as his close incarceration.

If a portion of our insane are to be inmates of their homes, then we must be prepared not to be ashamed of them, not to thrust them into garrets, but to treat them as much like rational beings as their cases admit. Patients who at home cannot be amused, who cannot, properly attended, walk abroad, or ride, or attend certain places of amusement, or enjoy some social intercourse, should be in an asylum, where these very necessaries of life are daily furnished.

The regular registration and visitation of all insane living in their homes would prove very advantageous not only to the patients themselves, but to their natural guardians, to the public, and to science: to the patients, as thereby their rights and privileges would be defined, their proper degree of freedom, enjoyment, comfort, and safety assured; to their friends and guardians, as thereby their great responsibility would be shared by an official competent to advise upon such points as the selection of attendance and nurses, the regulation of their duties, general hygienic management, and the capture and return of the escaped; to the public, as thereby it would be better protected against some dangerous members of the community; and to science, as then the statistician would at last be enabled to grasp beyond mere estimate and conjecture the actual number of insane in the State, whereas now, as heretofore, all his conclusions are confounded by this "unknown quantity."

It may be that society of the present day is not prepared for such an advanced stride; but, as the next revision of the lunacy law may include this class of the insane, it is time to make it the subject of thought and discussion. In the absence

of any legislation upon this special class, very much may be done to render tolerable the lives of many insane individuals who may be said at this time simply to exist; but why not utilize even an imperfect mind so far as its power for enjoyment and comfort extends?

TRANSLATIONS.

KIDNEY-COMPLICATIONS IN DIPHTHERIA.—Dr. J. Fischl is of the opinion that, even in very well marked cases of diphtheria, simple albuminuria is not so frequent an appearance as is usually taught, while actual acute nephritis, as is well known, occurs very rarely in the course of that disease. He publishes (*Zeitschrift für Klin. Med.*, No. 7) two cases of acute inflammation of the kidneys which made a good recovery after the appearance of dropsy. After making post-mortem examinations of ten cases of diphtheria which had shown albuminuria during life, with occasional tube-casts, he found the following condition in the kidneys upon microscopical investigation: in the arteries there was alteration of the *adventitia* (partly accumulation of cells, partly a massing of thready material); also, in a few cases, a change in the *intima* (swelling and desquamation of the endothelium). In the Malpighian corpuscles the characteristic alterations of glomerulo-nephritis were found; not seldom contraction also was observed in these bodies. In regard to the interstitial changes, the results of Dr. Fischl's examination agreed with those of most observers. In the parenchyma he detected swelling and fatty degeneration of the epithelium of the contorted tubules, and red blood-cells and round cells with variable frequency were seen in the lumen of these canals, and also in the loops and collecting tubes; but he was unable to find in them any micro-organisms.—*Centralblatt für Med. Wissenschaften*, No. 26.

THE EFFECTS OF THE INJECTION OF PEROSMIC ACID INTO THE LIVING TISSUES.—The parenchymatous injection of perosmic acid having been recommended in the treatment of neuralgia, Fränkel, of Hamburg, has made some experiments upon animals in order to ascertain the local effects of the remedy upon the tissues exposed to its direct action (*Berliner Klinische Wochenschrift*, 1884, No. 15). He found, upon microscopical examination, sixteen days after the first injection, marked changes both in nerve and muscle. In the former, many of the nerve-fibres were broken down, showing total loss of the axis-cylinder and complete degeneration of the white substance. He also recognized the presence of an epineuritis leading to formation of nodes and compression of the nerve-trunk. The muscular tissue in its parenchyma, as well as its interstitial connective tissue, was badly injured; the muscle-bundles were often of a waxy appearance, and were not clear in their striations; but even in others where the striated appearance was well preserved the contractile substance was colored of a dirty-brown tint, and was reduced in diameter. With staining preparations (eosin and hæmatoxylin or methyl-blue) it was demonstrated that there was a high grade of interstitial myositis present, with diminution of the muscular parenchyma. It was noticed that the affected muscles refused to take up the eosin which stained the normal muscle a beautiful red. It was also observed, as an interesting fact, that the axis-cylinder of the nerve-fibres is stained during life by the osmic acid just as it is after death. Perhaps this may, in part, explain its use in neuralgia. Although the effects of the remedy are local, they are likely to be durable; caution should therefore be exercised in using osmic acid injections for the relief of neuralgia or in the treatment of tumors. In a case of goitre, in a young man 19 years of age, L. Szuman injected the one-per-cent. solution into the enlarged gland about twice weekly for a period of three months, with most decided results in reducing the size of the tumor and permanently relieving the patient of his dyspnœa.—*Centralblatt für Chirurgie*, No. 28.

A CASE OF APHASIA WITH LEFT HEMIPLEGIA.—Prof. Catsaras, of Athens, reports in *La France Médicale* (No. 33) an interesting case of left hemiplegia with aphasia in a man who was not "left-handed." The patient was a lawyer, 35 years of age, who first experienced a transitory left facial paralysis in August, 1883. In September he had an apoplectic attack, followed by left hemiplegia and a purely motor aphasia, without any other

trouble connected with language; of this he was completely cured in a fortnight. Towards the middle of November there was a simple loss of consciousness for a few minutes, followed by another period of apparently perfect health; and, finally, on the 20th of January, 1884, he had another apoplectic seizure, with spasmodic left hemiplegia and a complex aphasia, which persisted up to the time of reporting the case. Following Charcot and Küssmaul, it was observed that this patient lost first the memory of the co-ordinated movements necessary to speech (motor aphasia, type Bouillaud, Broca); secondly, the visual memory of words (word-blindness); thirdly, the memory of the movements required in writing (agraphia); and, finally, though incompletely, the memory of the sounds of words (word-deafness).

As to the lesion, the author regards it as embolism of the right middle cerebral artery (*artère sylvienne*), with subsequent softening involving parts of Broca's convolution, the angular gyrus, the first temporal, and, finally, part of the second frontal convolution of the right hemisphere.

In preference to adopting the hypothesis of a double lesion in this case, the reporter suggests that it may be that in this subject there is no crossing of the pyramidal fasciculi.

Operative Treatment of Tuberculous Bones and Joints.—Selenkow, in a communication to *Wratch* (1884, Nos. 16 and 17) reports good results from careful removal of the affected parts, the diseased bone being resected, and the wound treated antiseptically. In order, however, to prevent any remaining bacteria from developing, he adopted the plan of removing the dressing and drainage-tubes upon the third or fourth day, pressing out the secretions, and, by means of a soft catheter inserted into one of the drainage-openings, injecting with some pressure into the cavity of the wound a ten-per-cent. alcoholic solution of iodine. In this way, adhesions in the wound are torn apart, and only strong, healthy attachments resist the solution. After the tincture has escaped, he occasionally introduces some iodoform into the wound before re-applying the drainage-tubes and bandage. This procedure was repeated every four days. The reporter mentions six such cases, of which two required extensive resection, but which were all healed without any fistula. He also has found the same treatment useful after evacuation of scrofulous and other abscesses.—*Centralblatt für Chirurgie*, No. 28.

An Electrical Neurosis. — In the *Progrès Médical* (No. 27) is a brief but interesting report of a young woman, 29 years of age, who, with ovarian hyperæsthesia, nervous anorexia, and other hysterical troubles of several years' standing, presents evidences of increased bodily electricity. Brushing her hair causes crepitating sounds, and sparks are visible in the dark. Light substances, such as pieces of paper, ribbons, etc., adhere to her fingers, and her linen clings so closely to her body as to interfere with her movements. These electrical phenomena are exhibited in various ways: they are more decided in dry and cold weather, and when her mind is excited. Her bodily feelings coincide with the electrical condition: when the tension is high, she feels well and is intelligent and lively; when the atmosphere is damp, she is, on the contrary, in a condition of lassitude. After electrical discharges from any part of the body she also feels painful fatigue. The patient eats poorly, is anæmic, and is subject to œdema of the ankles, most marked in damp weather. Her skin is unusually dry and harsh, and it is believed that it is to this fact that the phenomena are to be attributed, the dry skin interfering with the normal loss of electricity from the body: they are not attributable to increased production, but to decreased discharge, of electricity. Among the lower animals the cat, having a dry skin, presents somewhat similar phenomena.

Treatment of Hemorrhoids.—In the minor cases, Verneuil recommends (*Gazette des Hôpitaux*) cold douches and laxatives; in the severer form, he prefers forced dilatation to all other means. He regards the usual method of stretching with the fingers as insufficient, and recommends instead Ricord's or Lisfranc's speculum for the purpose of dilating the sphincter to its maximum, the patient being at the time under the influence of an anæsthetic. Eight days is usually sufficient for the cure. The author has never experienced any ill results from the operation.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 9, 1884.

EDITORIAL.

IPECACUANHA IN LARGE NON-EMETIC DOSE IN THE TREATMENT OF CHOLERA.

AMONG the numerous plans of treatment that have been recommended or actually adopted in the treatment of true or Asiatic cholera, there is none that, from past experience, seems more deserving of a faithful extended trial than that by ipecacuanha, as presented to the profession with such force and ability by Surgeon A. A. Woodhull, U.S.A.* The method of treatment of dysentery which was advocated by the author, by "large non-emetic doses," has become widely known and is generally practised, but the fact seems not to have been properly appreciated that he also insisted upon the possible value of this method of treatment in Asiatic cholera, the full title of his essay being "Clinical Studies with Large Non-Emetic Doses of Ipecacuanha, with a Contribution to the Therapeusis of Cholera." Without attempting an analysis of this valuable paper, we merely repeat the caution of the author, who especially enjoins upon those who adopt the treatment in their practice to adhere to the non-emetic method. Large doses, from a scruple to a drachm of the powdered root, may be given without disturbing the stomach, if the patient remain quietly in the recumbent posture after its administration and abstain for a time from drinking fluids. Very often, however, it is necessary to insure the desired result by the preliminary administration of a full dose of laudanum. The strikingly favorable results thus obtained by the administration of ipecacuanha in dysentery, in hemorrhage, and in collapse would certainly warrant the further extension of this treatment to analogous conditions occurring in the course of cholera. Nor is the recommendation for its employment in cholera without support from clinical experience. M. Bourdon, in the wards of La Charité, has used it with decided success in the treatment of cholera infantum, which so closely resembles the true cholera.† In fact, it was reported by M. Decugis (mentioned by Woodhull) that at the first appearance of the cholera in 1832, the physicians, struck by its resemblance to dysentery, proposed ipecac, and it was even considered a specific for cholera by Grisolle; but further experience taught that, when used in the ordinary way, it was of slight utility, and this opinion is generally echoed by our text-books.

The treatment of Dr. Woodhull is, on the contrary, based upon the effects of ipecacuanha when administered in a very different manner, in large non-emetic dose, in which it acts as a sedative, as pointed out by Waring, who also recommended its use in cholera.

THE PUBLIC EXHIBITION OF LEPERS CONDEMNED.

THE attention of the city authorities of New York and Philadelphia having been directed to the fact that a popular lecturer, named O'Donnell, of California, intended making a tour of the Eastern cities with two Chinese lepers, who were to be shown as instances of the evil results of Chinese immigration, we are glad to learn from the daily press that permission for such exhibition has been refused. It is also said that the lepers are now living somewhere in the suburbs of New York. As so little is known of the con-

* In a report to the Surgeon-General in October, 1874, which afterwards appeared in full in the *Atlanta Medical and Surgical Journal.*

† Reported by Chouppe in Recherches thérapeutiques et physiologiques sur l'Ipeca, Paris, 1874.

ditions favoring the development and the methods of communication of leprosy, it is impossible to say how much injury might be done by the two lepers in their public receptions: probably the danger would be greater to those who travelled with them in the public conveyances, or who lived in the same houses. It is, however, a well-established fact that dwelling and cohabitation with lepers will cause extension of this incurable disease to those apparently healthy; but, the malady being of slow development, it is uncertain how long exposure to it is necessary in order to communicate it to others. The first principle in the treatment, which has been developed from experience, is complete isolation of the affected from the healthy. This rule is violated by Dr. O'Donnell in bringing the lepers East; and he lays himself open to censure thus on sanitary grounds, quite apart from the moral one of exposing the afflictions of individuals suffering with incurable disease to vulgar and idle curiosity, and making of them an "attraction" to a public lecture.

TAKING POISON IN JOKE, WITH FATAL RESULTS.

A VOLUNTARY physiological experiment with certain pills was recently made by a family living in Philadelphia, who have gained thereby unexpected notoriety. As it is known that the pills contained strychnine, one-twentieth of a grain each, the results are of interest from a medical stand-point. The facts, as published, are as follows. On the 1st of August, Thomas M., 30 years of age, Daniel G., 19 years of age, Annie C., 16, Mrs. Mary K., about 50, and Mrs. Michael B., 45 years old, were seated around the supper-table. Just previous to eating, one of the party produced a box containing about fifty granules, the directions written upon the box being to take one before each meal. The others at the table passed the box around, each taking some: Thomas M. took nine, the others emptied the box, each taking probably at least five. It is not known how much Annie C. swallowed, but she probably took a larger dose, of at least half a grain, for she died in about three hours, after protracted tetanic convulsions. All the others were also affected in the same manner, with cramps and painful contractions of muscles; but, under medical treatment, they recovered after several hours' suffering. It seems as if the mistake had been caused by the appearance of the granules, which led the company to take them for homœopathic medicine, which is popularly known to be less effective in proportion as the dose is increased,—the less taken of it the better.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

HERE we are nearly at the end of "the season," which has been one of the dullest on record. Everybody was short of the needful; and the death of the Duke of Albany gave many of the patricians an excellent excuse for staying at home and practising economy, instead of coming up to town to spend money. Even the necessity for a whip among the peers to thwart Mr. Gladstone on the Franchise Bill has not brought to town more than a few scores of maimed, halt, and blind to discharge their duty at St. Stephen's, and to do this in a manner as economical as possible. If the different members of the medical profession are looking forward to their wonted autumn holiday, they realize that the expenses thereof will be defrayed from some other source than their "harvest of fees" from this season. If the proposed Medical Bill can survive the opposition of the threatened corporations, it seems endangered by the more important measures which are crowding each other out at the end of a session wasted by obstruction and perverse prevention of progress. If the bantling does struggle through, it will be a strong testimony to the toughness of his constitution. Nor is there anything else to stir the still waters of the medical world. None of the well-known leaders of the profession seem disposed to carry out their long-contemplated retirement, but cling to the fruits of their long labors tenaciously. When the three great medical

baronets and Dr. Quain, who holds a position just alongside them, retire, or are removed by natural causes, there will be no slight scramble among the many younger men who are willing to take their places,—*i.e.*, provided, of course, that the world is disposed to accept them. That something of the kind must happen, and that, too, before very long, is certain. There is many a slip betwixt the cup and the lip, says the old proverb; and who the successful men will be—well, of all the gratuitous ways of courting failure, George Eliot thought prophecy contained the greatest potentialities. The subject which still keeps the greatest hold on the medical mind at the present time is that of tuberculosis of the lungs. The advocates of the view of bacilli being at the bottom of the business are not disposed to abate their claims to a further hearing, and certain facts substantiate their view. Probably the treatment of pulmonary tuberculosis, as a question for a written examination, was never so difficult to answer as at the present day. Never easy at any time, it is a question which at the present widens out into limitless extensions. While there are those who hold a "bacillus blight" the cause *par excellence* of lung-tubercle, there are others who are inclined to look carefully at the prodromus of phthisis, at the conditions of the organism which precede the development of tubercles in the lungs. What is the resistive power which enables one system to withstand the "bacillus blight," while another seems to droop under it like mown grass under a summer sun? If phthisis pulmonalis be the result of the inhalation of one or more of a peculiar bacillus, to destroy these minute organisms is to "cure" the patient of phthisis. But, then, I do not know if any follower of Koch is prepared to propound such a sweeping hypothesis. On the other hand, the production of tuberculosis by the injection of fluids containing the bacillus of tubercle is a fact which furnishes a suggestive light on the obscure subject. Are we yet in a position to say this,—a chronic consolidation of a lung-apex will at least remain *in statu quo*, if not actually clear up to a great extent, provided tubercle-bacilli do not effect a lodgment in the consolidated lung and breed therein? Is that what is really meant when we speak of a person "turning consumptive"? or what is involved by Niemeyer when he says, "Healthy men should never feel sure that they will not die of an acute or chronic catarrhal pneumonia, proceeding from a cold, and resulting in caseous infiltration and destruction of the pulmonary substance"? If it could be shown as probable—we will not ask for it to be proved to a demonstration—that the lodgment of tubercle-bacilli in the consolidated lung-apex is the thing we have most to dread in any case where consumption is "threatened," then inhalations of agents calculated to arrest the development of these minute but significant organisms would become as much our bounden duty to the patient as we feel it to be incumbent upon us to check the night-sweats, or relieve a diarrhœa, or to build up healthy tissue by enabling the patient to assimilate fat in some form. That inhalations were adopted in pulmonary phthisis long before the researches of Koch pointed to a specific bacillus, is proved by a copy of Sir Charles Scudamore, "On Consumption," in my possession (which seems to be the copy sent by him to Dr. Latham, or, at least, "a" Dr. Latham). There he speaks of the value of inhalations in pulmonary consumption; the treatise bearing the date of 1830. From cases there recorded it certainly would appear that inhalations, especially of iodine, are of great therapeutic value. The first case he quotes is that of a small-chested youth, with a very bad family history, who was far advanced in phthisis. In addition to general measures, the inhalation of iodine in water at the temperature of 120° Fahr. was advised. Great relief to the discomfort in the chest was soon afforded thereby; the cough was much abated, and the breathing became easier. In a fortnight the general improvement was unmistakable, and the rapid improvement ended in "eventual recovery of health." Now, the *tout ensemble* of such a case points in the direction of a germicide,—of an agent by which these minute bodies are killed, and, consequent upon their demise, the symptoms of consumption abate and ultimately disappear. Such is the interpretation of the case by the light of modern investigations. At the present time, we find chambers provided in which the tuberculous patient can constantly breathe an atmosphere charged with carbolic acid. That in some cases great relief is readily furnished by a residence in such an atmosphere may not be denied; but it is clear that such a line of treatment is only practically possible in cases which can be subjected thereto,—viz., hospital patients. But is the lesson taught us thereby to be ignored as regards private patients? Certainly not, in my opinion, even if such a complete means of application is unattainable. The principle can be adopted, and it seems growing clearer and clearer, that in cases where there are masses of softening tubercle, in which, apparently, the bacillus of tubercle breeds freely, or there are cavities whose walls swarm with the bacilli, inhalations of some germicide seem distinctly indicated. The different respirators now before us would attain this end, just as we find a respirator charged with carbolic acid in a short time "sweetens" a bronchial dilatation which discharges fetid phlegm. The principle is a sound one, and capable of application in most cases.

While it must be admitted that such direct treatment of a case of phthisis is often of priceless value, and, in many cases, essential

to recovery, at the same time it must be borne in mind that the treatment of phthisis is not restricted to any such narrow measure. There is the treatment of the individual as well as of the disease. As regards the management of the case before there are distinct evidences of softening tubercle, the former is, of course, the treatment *par excellence* of the case. It is no good to stand by with folded hands and watch a case of apex-consolidation until there are tubercle-bacilli in the sputum, and then get up all the paraphernalia of an inhalation-chamber for their destruction. To do this would be nearly as bad as the conduct of the one-eyed young doctor who, when called to a case of smallpox, announced his ignorance of pustules, but who was prepared to wage effective war on fits if they appeared; or, as actually occurred in a case which came under my notice lately, where a doctor declined to take active steps in a case of diarrhœa in the tropics until the condition of dysentery was unmistakably developed. There is, to my mind, a great deal to be done before the "bacillus blight" falls upon its victim. There is a general impairment of the health in many instances, which invites the dread intruder to settle down, and which, if improved, would lessen greatly, if not do away entirely with, the risk of an invasion of bacilli,—an invasion not unlike that of the Goths of old when they settled themselves upon the lands of the peoples whom they had conquered, or even more like that of the blighting Moslems upon the lands around the Bosphorus. If the natives could have effectually resisted the invaders in the first instance, all the after-consequences would have been avoided. So in any case where there is apex-consolidation, or where there is reason to fear that soon lung-complication will show itself, the improvement of the general health may hold the bacillus-invader at bay,—in many cases at least. And how this is to be done involves a wide grasp of the case, including the family history. Where there is a history of consumption in the family, it is well for the medical man to take his measures promptly and energetically. To stop all unnecessary outgoings becomes the first duty. A diarrhœa will arrest the attention of the most careless physician; but a leucorrhœa often goes unnoted; and yet it is the drain which lands many a woman in consumption. Night-sweats are a deadly complication, and yet they are often permitted to run on, lowering the state of the patient steadily, until the grave yawns before him, when a little more knowledge—just a very little—would change the aspect of the case entirely. A dose of atropine at bedtime, and, presto! the draining night- or, more often, morning-sweat dries up; and, as the loss of blood-salts is arrested, the patient begins to feel an appetite for food, and develops therewith a capacity for its assimilation. Diminish the outgoings, or, in other words, "the body-expenditure;" that is ever the first step. Then the next is to increase the "body income." How many phthisical patients can trace their ruin to indigestion! They have lived on fairly well till the day comes when the stomach is upset,—perhaps by taking an ordinary meal when tired, which the stomach cannot deal with; and then the digestion is deranged. The body generally is under-fed; and, if there be already some lung-consolidation, the process of degeneration sets in, and tubercle-softening follows, and then bacilli settle down and finish off the case. Or a loathing of fat leads to tissues defective in fat, and then phthisis shows itself. The most certainly fatal case of phthisis is not, to my mind, that where lung-symptoms develop acutely, but where steady wasting goes on for some time and lung-symptoms only show themselves at the final stage. When that stage is reached, what is the good of any bacillicide, however certain in its action? The patient is played out, simply. A recent writer on consumption has pointed to those early stages where so much can be done if the physician is only on the alert in time. He points out how and by what signs a person may be singled out as likely to become the subject of phthisis, and so the coming mischief be averted. But how to spread such knowledge generally it is not easy to see. It is all very well for a man who has for years been attached to a hospital for diseases of the chest, and who has kept his eyes open when there, to pick out the cases which arouse his suspicions by some hidden, indescribable intuition,—a power given him by experience and observation; but, then, every medical man cannot have this opportunity, and especially the man in an all-round practice, who will see these cases in their first stages. The very man who needs this knowledge is not always the man specially endowed with it. There are, however, broad rules which can be promulgated for his benefit. The present practice of carefully examining the chest has this good effect at least, that the disease, if present, is in all probability recognized. The drawback to this is that, while no case is overlooked, a great deal of unnecessary alarm (and with that all that alarm involves) is set up by the discovery of some lung-consolidation, which is really of comparatively little moment. If a patient is found out of health and at the same time there is some apex-consolidation, then the process of putting two and two together follows, and the case is put down at once probably as one of consumption. Much will depend upon the temperament of the medical man: one man is more easily alarmed than another; one man readily takes fright and indulges in a bad prognosis in a case which a more experienced man of a cooler temperament will not regard as serious. It is rarely now that a grave case is treated as a slight one. Then,

if the means of the patient admit of it, he or she is bundled off to some health-resort and at once improves, or, in some cases, does not. In the successful case, of course, the credit of a cure is won; but with a large number of patients this exodus is impracticable; and then what remains to be done? Well, get them away from a clay soil and from areas of defective drainage, to a gravel soil or a chalk down. Then look to the outgoings. If the tongue be red and irritable, then bismuth with an alkali is indicated, with milk with an alkaliwater, or with milk extract, or some baked flour, until the tongue is normal; after which (and not until) the diet may be relaxed, and ordinary food can be taken and assimilated. If the tongue be coated, then a vegetable bitter with an acid and some sulphate of soda are indicated until the tongue is clean, after which a chalybeate may be added after food. When the digestive processes are put right, then some cod-liver oil may be useful; but if given before, the oil will only upset the stomach, and so throw the case back, sometimes very seriously. If all this can be carried out at a health-resort, all the better. Too frequently, however, the health-resort is left to do everything, and, as soon as the patient gets away therefrom, then the outward symptoms again manifest themselves, and the patient has to hasten back, or die. If the patient can do the first, life may be maintained for some time; if not, then death results. And all that has been said here applies to cases where there is no softening of a consolidated lung-apex, where there is such softening, and where a cavity tells of a very fast softening. But while the treatment of the individual must never be underestimated in the treatment of a case of pulmonary tuberculosis, I think we have clearly reached a point where the direct attack on the diseased area by medicated inhalations is indicated. If moist râles are heard, and there is some expectoration, and still more when the sputum contains the bacilli of tubercle, then inhalations are distinctly suggested. If, after their use, the lung-symptoms are diminished, and the bacilli are seen to be decreasing in number, then the case may honestly be said to be doing well. Whether tubercle-bacilli are the cause of tubercle, or whether an area of softening tubercle forms a favorable habitat for the bacilli, certain it is that the two have a distinct relation to each other. When the bacilli are seen, the case may be pronounced one of "consumption" as compared to mere "lung-consolidation," and, possibly enough, the presence or absence of the bacilli will be made the test of the nature of the case. But, if so, the appearance of the bacilli will point to the use of inhalations medicated with agents inimical to the tubercle-bacillus, in addition to what is already being done for the individual. Looked at from this point of view, the researches of Koch have a far wider application than some would assign them, and also bear on practical medicine more strongly than others would allow. The preventive treatment of heightening the resistive power of the system is quite compatible with the direct slaughter of the tubercle-bacilli, and in many cases, no doubt, the two can be combined to the benefit of the patient and the credit of the physician.

J. MILNER FOTHERGILL.

LOUISVILLE, KENTUCKY.

MR. EDITOR,—Some idea of the difficulties in the way of successful medical practice in Louisville may be conveyed to your readers when I tell you that another of our free dispensaries, established by a coterie of our enterprising young and old doctors, has suspended operations. When "medical advice and medicines free" won't catch enough patronage to avoid bankruptcy, what do you suppose is to become of doctors who expect to be paid for their services? Let this be a standing question for solution, please; suggestions welcomed. We fear that, unless we have some good ones, our door-posts, like those of the above-named dispensary, will be decorated with the estate-agent's *Mene, Mene, Tekel,*—"*For Rent.*"

The Louisville Medical Society, though it almost died of infantile tetanus, has begun to show some signs of healthy, vigorous growth. I am determined it shall be heard from for once.

At its last meeting, the subject for discussion, "Uterine Reflexes," was led by Dr. Douglas Morton in a report of a series of interesting cases, presenting many and varied reflex disturbances, wherein examination in all but one failed to reveal even a trace of local pathological change. In one case, a woman 35 years of age, married fifteen years, and without children, was attacked by what appeared to be cerebro-spinal meningitis. Intense occipital headache, opisthotonus, obstinate nausea and vomiting were so severe in the early stages of the case as to require the systematic employment of hypodermic morphia to relieve them, while paroxysms occurred in which the symptoms were much intensified. She had fever, but at no period of the attack, which lasted several months, did it exceed 102°. She finally recovered apparently for about two weeks, when attempts to walk provoked a recurrence. At this stage she consented, not without protestation, however, to an examination, which revealed no particular lesion to account for the constitutional disorder. Irrigation with hot water, followed by the application to the os of the strong tincture of iodine, subdued all the symptoms promptly, and they did not return for a year, when their renewal made the treatment again

necessary; but this time it failed to accomplish a cure. Free discharge was then brought about by the application of nitrate of silver, and she again experienced relief, which she has since enjoyed.

Dr. Morton thought it possible this woman might have had a true cerebro-spinal meningitis in the beginning, which so affected the nervous system as to permit its being easily unbalanced by any local irritation.

A woman, 45 years of age and the mother of several children, had felt her health declining for more than a year. Numbness in the leg, especially at night, made her fear paralysis. Constitutional treatment for several months failed to bring relief. Examination showed no local disease. Still, iodine applied and followed by glycerin tampons and hot-water irrigation resulted in recovery. This woman still menstruated,—irregularly, however. Yet it is interesting to note that a case of this kind recovered under this method of therapeutics.

A woman, 40 years of age, mother of two children, the youngest of whom was six years of age, suffered from occipital headache, dyspepsia, and reduced health generally. Pelvic symptoms were entirely absent. Examination showed the upper portion of the anterior lip of the os affected by granular erosions. Here it was exquisitely tender. There was no enlargement. This case was relieved in a manner similar to the others.

A woman, 24 years of age, with a two-year-old child, suffered from intense abdominal pains, implicating the stomach. Constitutional treatment had failed. Digital examination detected considerable hyperplasia. From the beginning of the treatment a profuse discharge took place from the cervical canal. General improvement followed, and recovery ultimately occurred.

A young woman, 20 years of age, had been in bad health for several years. Dysmenorrhœa and other pelvic symptoms were plainly yet not prominently present. Constitutional treatment had not availed to cure her. Examination revealed anteflexion and corporeal metritis. Local treatment for three months effected more relief than she had experienced for years. She had recently suffered much from dyspepsia, and candor compels the admission that she still suffers from it; but it is improved. Under proper constitutional treatment, she may, since the central irritation is abated, hope for further relief.

Another case, a woman 32 years of age and the mother of several children, had all the pelvic symptoms and signs plainly marked. She was unable to walk but a few feet, suffered from troublesome dyspepsia, and vision was considerably involved. Examination revealed not only a considerable degree of enlargement, but also a marked degree of retroversion. The correction of the latter and appropriate local and constitutional treatment to secure resolution afforded relief.

In commenting upon these cases, Dr. Morton said, "It appears singular that pathological conditions, apparently the same, in different individuals should give rise to such varied and often opposite manifestations, and that in one general disturbances should exist so far surpassing what should be expected to arise from the extent of the local pathological condition, while in another it appears so much less than might be reasonably anticipated." He thought the identity of pathology might be more apparent than real, and that, as our facilities for investigation increase, we may be able to detect differences which now escape us.

It should not be forgotten that these disturbances, continued and sometimes intensified as they are, may give rise to serious structural and functional affections. Thus, palpitation of the heart may end in that condition known as irritable heart. Local treatment, when new centres of irritation have been induced, such as dyspepsia, will not suffice, and the only relief then is to be looked for through a judicious combination of general and local treatment.

In discussing the subject, Dr. W. H. Wathen remarked that while this was a subject of great interest, it was, unfortunately, a subject not very perfectly understood, even by the very best. He thought the difference in the intensity of constitutional disturbance in different women could be accounted for upon the general principle recognized in the word "susceptibility," as applied to all diseases and all persons. There is in some constitutions a predisposition to the development of particular diseases; that predisposition may be handed down from parent to child, obeying the general law of inheritance. In respect to these particular cases, it might be styled the transmission of neurasthenia, which increases the susceptibility or the sensitiveness of the nervous system so that it responds by a reflex manifestation to the least local trouble. This neurosis affects the ganglionic system of nerves especially, and this system supplies all the blood-vessels, even the most minute. A little excitement of it is sufficient to produce a local congestion, it may be in the face or other part of the body, the situation above all others where it is likely to occur being in the uterus and its appendages. This congestion may pass away, or by continuance it may result in so-called chronic inflammation and hyperplasia. This, occurring, enlarges the uterus, increases its weight, and renders flexions more liable to occur.

To relieve this condition when it does occur, there is nothing equal to hot-water irrigation used for weeks and months if necessary, from a gallon to two gallons at a time, and at a temperature of 95° to 110°. It acts at once

as an anæsthetic to the part. Its immediate effect is congestion, but after a few moments the coats of the vessels begin to contract, their calibre decreases, and finally the parts are left in a depleted condition. When persisted in, due attention being given, of course, to constitutional measures to improve nutrition, such cases as those indicated will nearly always recover or be greatly benefited.

Dr. Erwin thought the medical profession in general too apt to refer reflex symptoms to uterine disease without sufficient investigation, forgetting that diseases of other central organs may produce the same or similar manifestations. For example, a middle-aged lady, whose reflex troubles had baffled the skill of several of the best physicians, who had examined and treated her locally and constitutionally, fell into his hands presenting the usual pelvic symptoms, leucorrhœa, backache, etc., and, as general reflex disturbance, severe frontal headache, vertigo, acid eructations, etc. An excessive discharge from the os, which had resisted all measures directed at suppression, was present. He examined the rectum, and there found a polypoid tumor attached by a pedicle above the sphincter. This was now removed. The leucorrhœa disappeared, all pelvic symptoms passed away, and the woman recovered entirely.

A young woman, the mother of two children, had suffered for a couple of years from what was regarded as monomania. She had no loss of appetite, no constitutional disturbance, nor other trouble except a constant and irrepressible desire to wash her hands and face. When left alone, she would perform these ablutions all night long. When interrogated as to why she did this, she replied that she had a sense of uncleanness which she could not tolerate, and the frequent ablutions relieved it. Examination revealed an abscess pointing in Douglas's cul-de-sac. This, when relieved, brought relief from the other singular manifestation.

Dr. J. H. O'Reiley said, "In the cases which Dr. Morton has reported, in which local changes were absent, he has still made local applications, on the principle, I suppose, upon which the man recommended his coondog. When asked why, he 'lowed everything was good for something, and, as the dog was good for nothing else, he must be good for coons. So, these cases, being referable to nothing else, must be uterine.

"Medical literature," said he, "teems with the history of such cases as have been recited, —as Dr. Wathen has said, their development occurring upon inherited or acquired neurasthenia. Such cases have long ago been explained, and from the lips of Dr. Wathen we have just listened to an excellent elucidation of the subject. Dr. Erwin accuses the gynæcologist of the fault of attributing everything to uterine disease. For my part, I would say I should certainly not think of attributing an irresistible desire to wash the hands and face to the uterus: I should have thought the woman crazy. There are certain head-pains, however, that have always been regarded as of uterine origin. These are the bi-parietal pains, which may, however, arise from obstinate constipation. A persistent occipital pain is almost pathognomonic of cervical trouble. These are different from the common neuralgias, both as to the nature of the pain and the recurrence of it. In the pelvis, however, we have important vesical, rectal, and urethral troubles, as well as uterine, and I recognize the warning as timely; yet good gynæcologists recognize these, and, like other good men, are not easily misled.

"There are still other causes than those mentioned by Dr. Wathen concerned in the causation of these troubles. There is what Hodge calls the irritable uterus,—a theory often opposed, but never yet successfully refuted. There is also, generally speaking, in these subjects a want of good red blood and solid muscular tissue. Then there is a periodical congestion too, which usually passes away, but which, failing to do so, as sometimes happens, is one of the most fruitful causes of chronic inflammation. In married women, after laceration, the parts may heal, and in the healing imprison nerve-filaments in the cicatricial tissue. A condition of this kind could not well be recognized through the speculum."

Dr. William Bailey thought that specialists gave entirely too much attention to the treatment of local conditions, and were too much infatuated with specular examinations. He ridiculed the idea that a specialist in eye and ear and throat diseases could recognize in local conditions anything suggestive of uterine disease.

Dr. Preston Scott desired to hear from the specialists present, particularly with reference to the disturbances of vision which frequently occur as reflex manifestations of abnormal conditions. Said he, "It is a fact beyond controversy that gentlemen now present have recognized from the persistent disturbances of vision, without adequate local cause, I suppose, the probability of their central origin and their manifestation through the sympathetic system in local disturbances of nutrition. Dr. Morton has made the proper application in his suggestions concerning the cases he has reported. Yet there is a larger and broader view to be taken of this subject.

"While a large number of the symptoms of general disturbance may arise from local causes, yet a large proportion of them arise from disturbances of the function of nutrition. Woman has a ganglionic system more highly organized than man, and, as she becomes the subject of various nervous disorders, this ganglionic system is more easily unbalanced, and then we find pathological states arising in which the influence of this nerve-state

must be regarded as an important factor. Therefore it is that measures of treatment addressed to the general condition alone often result in a cure without resorting to local measures. There naturally arise two opposite stand-points of observation. One man looks with a single eye through the speculum, and finds that the only method of diagnosis and treatment, while another treats them upon general principles. Happily, both sometimes succeed; unfortunately, both sometimes fail. Therefore, we must not, I think, confine ourselves to either the one method or the other in all cases, but adapt the treatment to the individual case. That treatment then will sometimes be purely local, sometimes purely constitutional, and sometimes a combination of both."

Dr. Dudley S. Reynolds thought there were two important points for consideration in relation to the causes concerned in the production of reflex manifestations: one the disposition or predisposing cause, the other the exciting. The predisposing causes are disturbances of nutrition, which should not be regarded as inherited. It is the one essential and never-absent state in all that class of people who have reflex nervous disturbances. Local mechanical conditions, whether from local congestion making pressure upon nerves, or effusion, or laceration, or inflammation, exert their powers with greater effect then upon this complex and little understood system of nerves.

"The important thing, it appears to me, in the beginning is to look to the improvement of nutrition. The mere inspection of the cervical canal, or that the presence of a flush here or an erosion there constitutes the sum total of the trouble, I doubt. Disturbances of vision are particularly liable to occur in women who suffer from flexions and from ovarian irritation. They are worse during the menstrual period. I have a patient under treatment now who is also under the treatment of one of our best physicians in the department of gynæcology. She has a dry throat, cough, exceedingly sensitive pharynx, even to the presence of food. The laryngoscopic mirror, if allowed to touch the walls, gags her, and if persisted in produces emesis. This person is quick in her movements, she does not eat prudently, and bears the other evidences of a neurotic female. She has a flexion of the uterus. While Dr. Mitchell, of Philadelphia, has done much in the interests of this class of debilitated subjects by studying more closely the subject of nutrition and adding somewhat to our knowledge of the best means by which it may be accomplished, it yet remains painfully evident that flexions of the uterus are incurable in most cases. Therefore one of the prime causes of reflex disturbance, made the subject of discussion this evening, it must be admitted, cannot in the present state of our knowledge be removed, and the field is still open for original research and experiment. Heroic feeding has its advocates, and I am impressed with the idea that better feeding promises more than any local measures yet suggested for the correction of the mechanical causes of hysteria."

Dr. William Bailey thought we should not overlook the fact that woman has nearly the same anatomical formation and nervous system that man has. He believed there was a tendency upon the part of specialists in this department to attribute too much importance to the uterine function. He thought many of these cases should be treated just as we treat men. "I take it," said he, "that, if you will examine carefully, there is scarcely a woman whose uterine functions are all regularly performed or who has not some degree of displacement. Yet thousands of them will go on enjoying perfect health until their attention is called to them by some specialist in this department of practice. While I am not disposed to disregard many cases that are successfully treated by this local method, I believe the majority of them can be successfully treated by means of improvement of the nutrition, disregarding as far as possible the uterine disease. I wish to express myself as decidedly opposed to the very frequent use of the speculum. The hot water will often, no doubt, of itself accomplish all that can be hoped for in the way of local treatment."

Dr. Wathen agreed with Dr. Bailey that local applications are often made when there is no necessity for it. He had often, he said, had women apply to him for local treatment for ulceration. "Ulceration," said he, "very rarely exists, unless it is specific or cancerous," and examination in these cases has revealed oftentimes that no ulceration existed. Thus an examination made by a competent man is often sufficient to make the nature of the case clear and the necessity for non-interference in this way apparent. Instead of specialists, who understand their business, making these frequent applications when unnecessary, it will be found more frequently that it is those opposed to specialism who do it. There are cases in which you might use hot water and almost everything else without doing good, yet applications of the particular kind required may bring complete and permanent relief.

"As regards the ability of the specialist to determine the probable existence of uterine disease by an examination of the throat, I wish to refer to just one case, though I might cite many others. I very seldom examine unmarried females, yet I do so occasionally. Something like a year and a half ago, a young woman who lives in the country, and who had consulted Dr. Kelch concerning her throat and lungs, came to my office bearing a note from him which stated that, from the condition of things presented on inspection of the throat, in conjunction with other symp-

toms, he suspected that trouble of some character existed about the uterus. She presented many of the symptoms of consumption, but none of the physical signs. She had a dry, irritable throat, and a constant cough. A brother had died the preceding year of what was said to be consumption, and, as she was the only remaining child, her parents grew very anxious about her. I acted upon the suggestion, made an examination, and found an abrasion of the os probably as large as a ten-cent piece. Under appropriate local treatment she soon recovered vigorous health, and remains well to this day. Beyond painful menstruation, this young woman presented no pelvic symptoms that would call attention to that region as the seat of disease."

Dr. J. H. O'Reiley reported a case of spurious pregnancy, in which the woman had carried her hallucination to the date of confinement, and also a case of marginal attachment of the placenta. Barnes's dilators were used. The woman recovered.

ALLEN KELCH, M.D.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

TUESDAY EVENING, June 12, 1884.

THE PRESIDENT, Dr. TYSON, in the chair.

Sarcoma of testicle. Presented by Dr. G. DE SCHWEINITZ.

A. K., aged 43, a native of Germany, married, presented himself May 22 in the Surgical Dispensary of the University Hospital for an opinion concerning a tumor of the left testicle with which he was suffering. His general health had always been good until one year ago, when he first noticed a beginning globular swelling of the left testis. A short time previous to this he had suffered with gonorrhœa, which was followed by an attack of orchitis. He knew of no member of his family that had ever been afflicted with any form of morbid growth. Examination revealed a very large, somewhat pear-shaped growth of the left testicle, over which the skin was freely movable. The veins were much enlarged. The inguinal glands of the left side were also involved, and the thigh and leg of that side swollen from œdema. Above the line of Poupart's ligament both palpation and percussion revealed another mass situated in the left iliac fossa. A very unfavorable prognosis was given, and operative interference not advised. He, however, earnestly begged for the removal of the tumor of the testicle, which caused him severe dragging pain and incommoded him in walking. The dangers of the operation, and the fact that it would at best only be partially palliative, were explained to him, and, as he still asked for its performance, the growth was removed. The case progressed very well for a few days, when he died rather suddenly. Dr. Hughes and myself made the post-mortem examination, and found the following conditions. Lungs showed commencing phthisis of apex, left pleural sac occupied by a pint of serum, in which floated some flakes of recent lymph. Heart normal, cavities occupied by post-mortem clots. Liver very fatty. Right kidney apparently normal. The retroperitoneal glands were all converted into a huge sarcomatous mass, as were also the glands and tissues of the left iliac region, and from there the growth passed up to the lumbar region, and surrounded, although apparently did not greatly involve, the kidney. Upon cutting into the tumor of the testicle, about a pint of bloody serum escaped from the cavity of the tunica vaginalis. The growth occupies the body of the testis, is soft and friable, in places breaking down, and the cavities thus formed filled with semi-fluid contents. The growth has burst through the tunica albuginea, thus showing the first step in the march of this morbid process up the spermatic cord into the abdominal cavity to the retroperitoneal glands and other tissues involved by the disease.

Microscopically, the tumor is a sarcoma, composed of round and spindle cells, which are in relation to the remnants of connective-tissue stroma. A very distinct tendency to alveolar arrangement is observable in places. It would probably be classed by some pathologists as an endothelial carcinoma or carcinomatous sarcoma.

Dr. Shakespeare said that the history of this case, the post-mortem finding, and the microscopical examination forcibly reminded him of the last discussion by this Society of the same subject. In this case the disease has evidently travelled along the deep lymphatics as far as the retroperitoneal lymph-glands of the lumbar region. In this particular it has followed the course of systemic infection pursued by a carcinoma rather than a sarcoma. But it seems to be now well established that the well-known law governing the generalization of sarcomata meets with frequent exceptions in the case of so-called sarcoma of the testicle. Dr. De Schweinitz had spoken of the presence in this tumor of an alveolar structure, and in truth the manner in which the growth had exceeded the bounds of the testicle brings to mind at once the history of an alveolar sarcoma. The reporter had spoken of this tumor as "an endothelial sarcoma." Dr. Shakespeare objected to this use of the term "endothelial," and thought that the tumor in question would be more properly defined as "an alveolar sarcoma." He thought that the term "endothelial" was most commonly applied to carcinomata of certain kinds rather than to sarcomata, and did not think that the tumor named by Klebs "an

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endothelial carcinoma" differed from other genuine carcinomata in the form or nature of its cells and alveolar structure, but only in the fact that it may originate or be propagated in the lymph spaces or channels. If the term "endothelial" be insisted upon in this case, why not call the growth "an endothelial carcinoma"? This naturally raises the question of pathogenesis. We are told that the testicle is a derivative of the mesoblast. If this be true, there is ground for debate as to the proper name to give a tumor of the testicle which has an alveolar structure and a clinical history analogous to that of true carcinoma. He who believes that true carcinoma never has a real connective-tissue origin will not consent to call such a growth of the testicle a carcinoma unless he can satisfy himself that, by some chance, a few epithelial cells from the blastoderm have become misplaced in the process of development and have remained here to form a nidus of a future carcinoma.

Malignant tumors of the testicle seem to occupy an anomalous position. They are called sarcomata in the main, and yet, as a rule, their clinical history does not correspond to the sharp outlines which distinguish this class of tumors in other localities. On the whole, Dr. Shakespeare was inclined to agree with those writers who accepted in general a connective-tissue origin for true carcinoma in contradistinction from the epithelial origin of true epitheliomata, and therefore saw no well-grounded objection to applying the name of true "carcinoma" to those growths of the testicle which present a typical clinical history and anatomical structure of carcinoma, although they may spring from connective tissue. As bearing upon the subject of pathogenesis of carcinoma, he referred to the observations of a few authors who deny the epithelial origin of some glandulous structures, mentioning in particular the opinion of Creighton, who, after a careful and extensive series of observations on the development and involution of the mamma, concludes that the acini of this gland are not developed from the cutaneous epithelium, but are derived from the connective tissue.

Carcinoma ventriculi. Presented by Dr. J. C. WILSON.

The specimen was removed from the body of A. C., aged 58 years, a native of Ireland, and a washer-woman by occupation, who was admitted to the Philadelphia Hospital March 6, and died June 2, 1884.

The symptoms of the disease first attracted the patient's attention six months before her admission to the hospital, and were indigestion, flatulence, acid vomiting at intervals, constipation of obstinate character, and, later, starvation-signs, wasting, extreme pallor, a dull, muddy skin, and great feebleness. About the time of her admission a small, hard, oblong tumor made its appearance to the right of the median line, just above the navel. This tumor was movable, but not the seat of pain. In fact, pain was rarely present. Death resulted from exhaustion. Upon post-mortem examination, the stomach was found to be greatly dilated, extending down almost to the pubes. A cancerous mass was evident from the serous surface, presenting a nodule about the size of a hen's egg. Upon section, the pylorus was found to be very much contracted from the new growth, which was a scirrhous cancer undergoing colloid change. The mucous membrane of the stomach showed numerous ecchymoses of varying extent, and the changes due to chronic catarrhal gastritis. No metastases to other organs could be discovered, and the lymphatic glands were not enlarged. The organs were all much atrophied, otherwise normal. Slides showing the microscopic appearances of the tumor were exhibited.

Aneurism of the left ventricle communicating with the aorta. Presented by W. E. HUGHES.

T. C. White, æt. 39 years, a ship-carpenter, was admitted to the University Hospital under the care of Dr. E. T. Bruen, March 6. He had always worked hard, been much exposed to weather, was a fairly-temperate man, and had never had syphilis. He had had several slight attacks of articular rheumatism, but during none of these attacks had there been any symptoms referable to the heart. There was nothing of moment in the family history. Three years ago, his strength, which had never been excessive, failed somewhat, and it became impossible for him to work constantly. Previous to this, while he had never been very robust, he had yet been able to work regularly. There was with the failure of strength more or less dyspnœa on exertion, with a tendency to take cold on any slight exposure, but no pain over the heart, and very little palpitation. Six months ago he was very much exposed, and since then has been much worse, palpitation now for the first time becoming troublesome. When first seen, the slightest exertion caused the most intense dyspnœa and very annoying palpitation; his hands and face were congested, and his lungs filled with moist râles. The apex-beat of the heart was in the fifth interspace in the nipple-line, its action strong and heaving. Over the aortic cartilage could be heard a strong, blowing, double murmur. He died April 5, of gradually-increasing dyspnœa, due apparently to congestion of the lungs. He had never complained of pain in the heart. There had been no œdema. *Autopsy*, by Dr. Barber, six hours after death.—Pericardium normal. Heart large, its left ventricle moderately hypertrophied and dilated; right normal; muscular tissue apparently normal. Between the posterior leaflets of the aortic

valve was an oblong opening, with smooth, rounded edges, extending one-quarter of an inch above the point of juncture of the leaflets into the aorta, and one-half of an inch below into the wall of the left ventricle, much wider in the ventricular than in the aortic wall. This opening prevented the approximation of the leaflets, holding them at least one-quarter of an inch apart, and permitting free regurgitation of blood into the ventricle. The leaflets were attached along the opening; in fact, above they formed its edges. This opening led back into a cavity about as large as a walnut, lying between the base of the aorta and the upper part of the left ventricle on the one hand, and the right auricle on the other, bulging decidedly into both auricle and aorta. Its lining membrane was continuous with the endocardium, and was thickened and roughened, but not calcareous. The endothelium of the posterior wall of the aorta covering the projection was also somewhat thickened and roughened. Between the upper part of the sac and the aorta, where the separating tissue was very thin, composed apparently of only two layers of endothelium, there was an irregular tear, permitting free intercommunication between the sac and the aorta. Between this tear and the upper margin of the opening described above was a bridge of firm aortic tissue. The endothelium of the right auricle over the sac was rough and thickened. The wall of the sac was formed of connective tissue and endothelium; it contained only some recent coagula, none that were laminated. The coronary artery arose immediately above the sac, and was not involved in it. The leaflets of the aortic valve were perfectly healthy. Other valves normal. The endothelium of the heart showed no spots of degeneration except that mentioned in the right auricle. The aorta, above the sac, as well as the coronary arteries, was not in the slightest degree atheromatous. Both sides of the heart contained some chicken-fat clots. Lungs deeply congested. Other organs normal.

Aneurisms of the aorta—Empyema.—Presented by W. E. HUGHES.

J. H., white, æt. 35 years, a shoemaker, was admitted to the University Hospital, under the care of Dr. E. T. Bruen, December 26, 1883. He has used alcohol decidedly to excess, but has never been much exposed to weather, and has never done any hard work. There is no history of venereal disease. There is a distinct family history of rheumatism, and he himself had, twelve years ago, acute articular rheumatism. Since then he has had occasional fugitive pains, principally in bad weather. Fifteen months ago he caught cold, and soon after began to feel slight pains along the crest of the left ilium. The pain increased for four days, when it had become almost unendurable, and extended from the left loin along the crest of the ilium into the groin. His urine was passed frequently and painlessly in small quantities, and contained no blood. The pain was ameliorated by treatment, but not wholly removed, though there was not enough to keep him from following his usual occupation. It was almost invariably aggravated by damp weather, and was not decidedly influenced by motion. Twice since then he has had paroxysms of severe pain; and each time, after taking a mixture containing oil of turpentine, urination has been frequent and painful, and the urine has contained blood. For the last two months he has had more or less stitch-like pain at the base of the left chest, and a hacking cough. His general health has been failing only slightly; he thinks he has lost about ten pounds of flesh. On admission, his face was pinched and anxious, his breathing rapid and shallow, with intense pain at the base of the left lung. Physical examination showed friction-sounds at the base of the left lung, with evidences of a small amount of fluid in the left pleural cavity, collected posteriorly. The respiratory murmur over the upper part of the left lung was not quite so distinct as that over the right. The apex-beat of the heart was not ascertainable with certainty, but seemed to be a little outside the normal point. The sounds at the apex were indistinct; and synchronously with the systole was a rubbing sound, heard only during inspiration. Towards the base of the heart was developed a harsh systolic murmur, best heard over the upper bone of the sternum, conducted feebly into the carotids, and not heard posteriorly. The heart-action was too strong, the whole pericardium heaving. The normal area of aortic dulness over the upper bone of the sternum was somewhat widened. He complained of a constant dull pain running from the left loin along the crest of the ilium. Urination was normal, and the urine contained no abnormal constituents. Under the use of salicylate of sodium the pleuritic pain was quickly relieved. The lumbar pain completely disappeared after a course of alkaline diuretics. The fluid in the left pleural cavity slowly increased for a while, then remained stationary till one week before his death, when there was a rapid increase. The pleural friction-sounds came and went. The friction-sounds heard over the heart were even more variable, sometimes systolic, sometimes double, occasionally dependent on the respiration, and again occurring regularly with every beat of the heart. Gradually to the left of the sternum, in the second and third interspaces, a new centre of pulsation developed, apparently distinct from the cardiac impulse, and over this area resonance was impaired. Two months after he was first seen, a systolic murmur was detected about the middle of the posterior border of the left scapula, distinct from the murmur heard an-

teriorly. Coincidently with the development of these conditions there was a steady decrease in the amount of air passing into and out of the left lung. There was no other pressure-symptom. For a month before he died he had irregular rises of temperature, with profuse perspiration, and lost flesh rapidly. April 22, Dr. Wharton introduced a tube into the left pleural cavity, through which a large amount of sero-pus drained off. He died April 27.

Autopsy, twenty-four hours after death.—Body much emaciated. In the sixth interspace, one inch anteriorly to the mid-axillary line, is an opening leading directly into the left pleural cavity, which is filled forward to the anterior axillary line and upward to the spine of the scapula with a sero-purulent liquid surrounded by walls covered with a pyogenic membrane. The lung occupies the remainder of the pleural cavity, and is everywhere closely adherent; it is compressed. The fibrous tissue is increased, and there is slight catarrh of the bronchial mucous membrane. The pericardium is dotted with scattered patches of recent lymph, and its cavity contains three ounces of flaky serum. The heart is somewhat enlarged, the valves perfectly normal. The aorta is dilated, its endothelium proliferated, roughened, and in places calcareous. Springing from the arch posteriorly to the origins of the left carotid and subclavian arteries is an aneurism the size of a filbert, extending back into the connective tissue to the left of the trachea. At the end of the descending part of the arch is another aneurism, as large as a peach, springing from the right posterior surface of the aorta, eroding the anterior face of the bodies of the fifth, sixth, and seventh dorsal vertebræ, pressing forward and almost occluding the left bronchus. It has ulcerated through the wall of the bronchus, but exudation of blood has been prevented by a firm laminated clot which fills this opening. There was no pressure on the œsophagus or on nerves. At the origin of the cœliac axis is another aneurism, half as large, pretty well filled with laminated clots. Kidneys and other organs healthy.

THURSDAY EVENING, JUNE 26, 1884.

THE PRESIDENT, Dr. TYSON, in the chair.

Specimens from a case of resection of the humerus. Presented by Dr. NANCREDE.

MARY D., æt. 17 years, from whom these specimens were removed, received a severe compound comminuted fracture of the left humerus by having her arm wound around the main shaft of a spinning-mill's machinery on January 2, 1884. She also, at the same time, received several severe scalp-wounds. Irrigation with bichloride of mercury solution resulted in the salvation of the arm, although in the effort the girl nearly lost her life. At the end of six weeks, no union having taken place, the ends of the fragments being necrotic, I cut down, removed the small fragments here presented, and, after sawing off the ends of the main fragments, drilled and fastened them together with two stout silver wires. The whole extremity was then put up in a fixed apparatus (plaster), which was not disturbed until irritation of the skin from pressure, etc., required it. Now, at the expiration of about five months, the fragments seem firmly consolidated, with the line of the bone apparently perfect.

Microscopic studies from a case of spindle-celled sarcoma of the breast. Presented by Dr. G. DE SCHWEINITZ.

I desire to exhibit a few sections this evening cut from a tumor of the breast removed by Dr. John Ashhurst in the University Hospital. The history of the case in brief is as follows: Annie S., married, aged 35, the mother of four children. Family history good. Her own health good until two years ago, when she began to suffer from malaria. The tumor of the breast first began to be manifest one year ago, and grew gradually, without much pain, until the late operation, when it had attained the size of an orange. There was no enlargement of the axillary glands. The nipple was not retracted. The growth to the touch was hard, and in spots the skin had become adherent, giving rise to the pitted, somewhat brawny or lardaceous appearance which is described by surgical writers as rather indicative of scirrhus of the breast. This appearance was sufficiently marked to cause the diagnosis of hard carcinoma to be suggested as probably correct. After removal, when the mass was laid open, both its surfaces did not appear concave, as is usually the case in a scirrhus. Microscopic examination cleared up the diagnosis, for, as you will see by examining the specimens, they show the typical appearances of a small spindle-cell sarcoma. It seemed a good case to illustrate the difficulties sometimes encountered in correctly diagnosticating tumors of the breast, and for this reason I have briefly placed it upon record.

COLLEGE OF PHYSICIANS.

AT a meeting held June 4, 1884, the President, Prof. J. M. DA COSTA, in the chair, Dr. WHARTON SINKLER read a paper on

"A FORM OF NUMBNESS, CHIEFLY OF THE UPPER EXTREMITIES."

For several years I have observed in my service at the "Infirmary for Nervous Diseases" in this city, and occasionally in my private practice, quite a large number of pa-

tients whose prominent symptom was numbness of the hands.

The symptoms in these cases are quite regular and constant in their general characters. The patients are usually women,—at about the change of life,—although cases may occur in men, as will be seen from the instances given below.

The numbness generally begins in one or both hands and gradually extends up the arms. It may be felt in the feet and legs also. It is almost always most marked in the morning before the patient rises.

It is described as a "tingling," and "like pins and needles," or as if the limb "were asleep."

One patient, in whom the numbness was felt in both the upper and lower extremities, said she felt like "a sleeping fool." Notwithstanding the numbness, there is but little loss of feeling to touch or pain, and usually the compass-points are distinguished as readily in the affected part as in other portions of the body.

The numb member is weak, but there is no paralysis, and the weakness is transient. Often there is pain associated with the numbness. The patients sometimes think the hands are swollen at the time when the numbness is most marked.

I will give briefly the histories of some typical cases of the affection. It must be borne in mind that I do not consider all cases of numbness as coming under this head. There are many cases of numbness met with which are not dependent upon organic lesions of the nervous centres and yet differ from those which I am now considering.

Case I.—Hannah R., æt. 30 years, single, coat-maker, applied at Infirmary for Nervous Diseases February 6, 1872. Complains of numbness and pain in both hands and arms. It began three weeks ago in the hands, and the attacks now extend above the elbows. They are induced by sewing, and also come on at night. The numbness and pain begin in the ulnar distribution of the right hand, and then extend to the rest of the hand and up the arm. In the left hand it is confined to the forefinger. Sensation is accurate in the affected regions. The ulnar distribution is affected readily by slight pressure over the course of the nerve. Some tenderness over the median nerve.

There is no spinal tenderness. The pulse is feeble, and there is a slight murmur heard at the base of the heart. There is some rheumatic stiffness of both wrists, and decided difficulty in moving the right shoulder.

Under the use of galvanism and a very strongly stimulating liniment to the arms, the patient was entirely relieved of the numbness and pain.

Case II.—Letitia M., æt. 48 years, applied at the Infirmary for Nervous Diseases July 5, 1878.

Has always been a healthy woman, and has no history of rheumatism. About one year ago noticed numbness in the right hand, at first in the thumb and first and second fingers, and occasionally in the other fingers. In the beginning it was felt only in rising in the morning, but latterly it has remained all day in the first and second fingers. It is always worse in the morning. About two months ago, she noticed pain at the base of the thumb like a sprain. It comes on with any movements of the arm, and ceases when the limb is at rest. Any movements which require pressure with the thumb bring on pain. There is slight pain on pressure over the median nerve. Sensation to touch and the compass-points in the hand and arm are normal.

Case III.—Catherine O'C., æt. 50, washerwoman, applied at the Infirmary for Nervous Diseases June 22, 1880. Catamenia have ceased for some time. Six months ago began to have numbness in the left hip, which extended down the leg. Has had an attack in the right hand. It is worse in the mornings.

Dynamometer, right 90, left 70.

Ordered ext. ergot. fld. gtt. xx t. d.

July 14.—Returns, saying that she is much better.

Case IV.—Mary M., æt. 60 years, applied at the Infirmary for Nervous Diseases September 15, 1880. Two years ago was cutting grass with scissors, when she injured the forefinger of the left hand. This was followed by numbness of all the fingers, and extended up the arm. The numbness and tingling are now in both arms. It is also felt in the legs. It is most marked at night when the patient is in bed, especially if she lies upon her back. The sensibility of the fingers is good, but there is slight loss to compass-points. The numbness is most marked in the second and third fingers. The hands feel weak. Dynamometer, right 80, left 85. Ordered ext. ergot. fld. ℥ss t. d.

October 13.—Much better. Dynamometer, right 100, left 100.

Decrease ergot to gtt. xx t. d.

26th.—Not so well. Increase dose of ergot to gtt. xl t. d., and apply mustard-plasters over spine every night.

December 8.—Dynamometer, right 115, left 100. Numbness very much less.

The patient continued to improve, and when last seen, in May, 1882, stated that she was greatly relieved of the numbness, although it still occurred at times. If she allowed the arms to lie close by the sides when asleep, they became numb. If they were extended this did not take place.

Case V.—Mrs. B., æt. 50, nurse, applied at Infirmary for Nervous Diseases November 25, 1881. Menopause eighteen months ago. Is in good health, with the exception of numbness of the hands, which began several years ago. There is no assignable cause for

the numbness. The numbness is always in the ulnar distribution, and occasionally in the median distribution of hand, and extends up the arm. It is decidedly most marked in the left hand and arm, and is occasionally felt in the left foot. The position of the arms had no influence in bringing on an attack of numbness, but prolonged exertion of the arm will induce it. There is always loss of power of the arm after the numbness has passed off. The dynamometer shows a difference of 20° in favor of the right hand. The patella reflexes are good; heart normal.

Case VI.—Mrs. J., æt. 51, applied at Infirmary for Nervous Diseases February 18, 1884. Two years ago used her right hand very much. Then began to have numbness in the fingers and hand. Following this, there was a burning pain. Her general health has been good, but she sleeps badly. The numbness begins in the fingers, and it is followed by a burning pain which also begins in the fingers and extends up the arm as far as the elbow. It is most frequent in the early morning.

There is slight tenderness on pressure of the ulnar nerve at the elbow.

No loss of sensation to touch or to compass-points. Dynamometer, right 80, left 95. Ordered ext. ergot. fld gtt. xx t. d.

February 25.—Returned, saying that the numbness and pain are much relieved. Continued same treatment.

March 10.—For the past few days symptoms have been worse. Is sleeping badly. Ordered to stop ergot and take sodii bromid. gr. xv t. d.

April 17.—Reports that she was not so well while taking bromide. Returned to ergot of her own accord yesterday, and slept well last night. The numbness is also much less.

Case VII.—Mrs. M., æt. 50, widow, consulted me July 13, 1881. Has enjoyed good health and worked hard until recently. Catamenia regular until three years ago. Then she began to have numbness and pricking of the feet, with starting of the legs, while in bed. The numbness then extended to the hands and arms. Numbness is now worse in left arm, but a month ago the right arm was most affected. The wrists are painful and feel as if sprained. If the arms hang down, the numbness is increased. The hands and legs become swollen. She has frequent "flushes of heat" through the whole body, and she then becomes flushed and warm, the sweat starting out freely. Her sleep is interrupted by the starting of the legs. She is a stout, florid woman; has a good appetite, and no dyspepsia or constipation of the bowels. The urine was found to be free from albumen. She is very nervous, and often has headaches. The symptoms were markedly relieved by bromide of sodium and ergot.

Case VIII.—Charles E. S., æt. 34, carpenter, applied at the Infirmary for Nervous Diseases August 30, 1878. For a year he has had a sense of general fatigue, and for several months has had pain in the right shoulder. He has worked very hard, both mentally and physically, for some years. Since last fall has felt very sleepy all the time. A few days ago noticed twitching of the right hand, and at night was wakened by pain and numbness in the palm of the hand and twitching of the fingers. Since that time the numbness and pain have continued, but are worse when he lies down, so that he is prevented from sleeping. He has had pain in the cervical region of the spine. The patient is obliged to use the right hand a good deal, as, for instance, in planing, and this brings on the attack of pain and numbness. On examination, no twitching is seen, but the patient says there is a feeling as if the fingers were twitching. There is no loss of sensation in the right hand to touch or compass-points. The right hand has become weaker. Dynamometer, right 130, left 130. Appetite poor; tongue furred; tendency to diarrhœa. The urine is free from albumen. Ordered potassii iodid. gr. x, vin. ergot. fʒj t. d.

September 6, 1878.—Is better. Can sleep now, but is awakened about 5 A.M. by pain and numbness in the right arm and shoulder.

11th.—Improving, but the early morning pain and numbness continue. Increase wine of ergot to fʒiij t. d.

18th.—Now sleeps very well. No early morning pain and numbness.

This patient remained under treatment at intervals until September, 1881. He had occasional relapses,—the attacks being almost invariably brought on by over-use of the hand. At times the numbness extended to the right leg. The pain in the back of the neck was sometimes felt. The last note of the dynamometer was—right 155, left 150. The treatment consisted in the free administration of ergot, and, after the subsidence of the symptoms, phosphorus, strychnia, and iron were given for long periods. Blisters were applied on the cervical spine several times.

Case IX.—Mr. H. P. M., æt. 30, married. This patient had an attack of poliomyelitis anterior to 1877. I reported his case at length in the *Amer. Journ. of the Med. Sci.* for October, 1878. He made a complete recovery from the paralysis, and enjoyed excellent health until March, 1883. At this time he came to me complaining of numbness in the hands. The attacks came on in the early morning, and would waken him from sleep. At first he ascribed it to sleeping with his arms extended above his head, but it continues to occur no matter in what position the arms are. The patient is in good general health. No indigestion or rheumatism. The sensation in the hands is normal; the grip is weaker than before the numbness began. Dynamometer, right 156, left 120. He complains of an area of coldness in the right

thigh above the knee. There is no anæsthesia or numbness in this region.

This case was treated at first with iodide of potassium and massage, and later with strychnia. The symptoms were gradually relieved, and the strength of the hands returned. On April 7, 1880, the dynamometer marked right 160, left 130.

He still had occasional returns of numbness until October, 1883. At this time, however, the numbness was confined to the tips of the fingers, and did not disturb him until late in the morning.

Mr. M. consulted me again on March 17, 1884; he stated that he had remained free from numbness until lately. The attacks came on as before,—*i.e.*, in the early morning, waking him at about 5 A.M. The numbness is worse in the right hand, and this hand is relatively weaker than the left. Dynamometer, right 142, left 136.

The hands feel as if they were swollen in the early morning.

Ordered ext. ergot. fld. gtt. xxx t. d.

April 4.—Patient reports improvement. Numbness comes on later in the morning. Now ordered strychniæ sulph. gr. $\frac{1}{60}$ t. d. Ergot stopped.

26th.—Better; sleeps until 6 A.M., but is then wakened by the numbness. Stop strychnia. ℞ Syr. d'ergotinine (Tanret's) f℥j t. d.

May 6.—Patient thinks last prescription has had more decided influence in relieving the numbness than anything he has taken; the numbness comes on later every day. Dynamometer, right 158, left 142.

18th.—Patient now has no numbness.

It will be seen that of the female patients whose cases I have given their ages were between 48 and 60 years, with the exception of one who was 30 years. In this case the disorder was induced by the nature of her work, which was constant and hard sewing. The ages ranged as follows:

1 aged 30 years.	1 aged 51 years.
1 " 48 "	1 " 60 "
3 " 50 "	

In two patients, Cases I. and VII., there were evidences of rheumatism, but in none of the others were there any symptoms of rheumatic trouble. In Cases I., IV., and VIII., the origin of the trouble seemed to be in over-use of the limb first affected. Indeed, in Case VIII. the affection at first seemed like a low form of an ascending neuritis, but afterwards the symptoms were more general.

Most of the patients were in good general health, but some were anæmic or overworked.

The numbness in most instances was in both arms; occasionally it was found in all of the limbs, and in three cases in one arm alone. The ulnar and median distributions were most frequently affected.

Pain was associated with the numbness in several patients. It was not an acute pain like neuralgia, but, as one patient expressed it, like the pain which comes when a limb is getting over being asleep. Tenderness over the ulnar or median nerve was observed several times. There was usually some loss of power in the parts involved, the dynamometer showing several degrees' difference between the hands in the cases when only one limb was affected. The duration of the affection was from a few months to several years. One of the patients had suffered from the disorder for two years before coming under observation, and at the end of a year and a half still had occasional attacks.

Dr. Weir Mitchell, in a lecture on "The Symptom Numbness,"* and later in a chapter in his work on "Diseases of the Nervous System," has described several varieties of numbness. Most of his cases were in anæmic or hysterical persons, and the symptom yielded under a course of treatment which tended to improve the nutrition and *morale* of the patients. He refers to cases in which the numbness came on during sleep, and remarks that this is a form "which belongs to the night." He finds that the numbness in the cases he has seen is frequently hemiplegic in character, and alludes to the fact that "some persons who have gotten pretty well of a hemiplegia of organic cause are liable to waken out of sleep with numbness and lessened power of the side once palsied."

Dr. James J. Putnam, in a paper read before the American Neurological Association,† treats at length of a series of cases of "paræsthesia, mainly of the hands." He bases his paper upon the notes of thirty-one cases, and the description he gives resembles those which I have related. He finds that most of his patients were women, and almost all were in middle life, but he does not remark upon the fact that they were about the period of the menopause.

Dr. Putnam suggests that the possible cause of the affection is "alterations of the blood-supply of the smaller branches or terminal filaments of the sensitive nerves supplying the affected districts."

The treatment of this writer consisted in the use of galvanism, phosphorus, strychnia, bromide of potassium, and several other drugs. He did not think that he had had sufficient opportunity to test the value of the different remedies, but seems to have found phosphorus of more value than any other one means used.‡

Dr. J. A. Ormerod has described twelve cases§ which very closely correspond to those which have come under my observation.

* Med. and Surg. Reporter, December 2, 1876.

† Archives of Medicine, vol. iv. No. 2, October, 1880.

‡ In a note recently received from Dr. Putnam, he says that he has lately found lead in the urine of one of the patients referred to in his paper, and thinks that it should be looked for in all cases of numbness.

§ St. Bartholomew's Hospital Reports, 1883.

All of his patients were women, and the attacks of numbness began to come on about the cessation of the menses. Three of his cases were rheumatic, and in some the trouble proceeded from the nature of their work. Bromide of potassium afforded marked relief in many of the cases. Dr. Ormerod compares this affection to the deadness of the fingers which some persons experience after exposure to cold, and therefore ascribes it to vascular spasm.

It has seemed to me that in these cases there is probably a condition of hyperæmia either of the nerve-trunk or of a portion of the cord. In some cases I think the hyperæmia is confined to the nerve-trunks or to some of the terminal filaments of the sensory nerves, but in others it seems not unlikely that the cervical enlargement of the cord becomes hyperæmic or congested, from the fact that the numbness is often bilateral. The circumstance that the affection comes on at night seems to me to strengthen the view of the pathological condition being one of hyperæmia, for the supine position favors an increase of blood in the cord and the nerves of the extremities. I have seen patients in whom the numbness would come on if they lay down and fell asleep even for a short time in the day.

Women at the change of life are more prone to hyperæmias and congestions than at other periods of life, and they are the most frequent subjects of this form of numbness.

In several of my cases ergot gave marked relief, and Dr. Ormerod found bromide of potassium the most successful therapeutic means he used. Both of these remedies are believed to diminish the blood-supply in the nervous centres. It is true that Dr. Putnam found phosphorus the most useful drug in his cases, but in one of those which he reports the remedy failed, and another was relieved by bromide of potassium.

From my experience in these cases I should say that the prognosis in middle-aged women was not good for permanent relief. The numbness can generally be greatly benefited or stopped for the time, but it is liable to return. In those cases where the trouble has been induced by overwork of the part, one can almost surely promise permanent cure if the cause can be removed.

With regard to treatment, as indicated above, ergot has proved the most useful medicinal means I have employed. Massage and spinal galvanism are always useful adjuvants, and so are all means which improve the general health. Bromide of potassium has helped some of my cases, and one patient was much benefited by sinapisms over the spine. It was found advantageous in most of the patients to give strychnia for a time after the disappearance of the numbness.

REVIEWS AND BOOK NOTICES.

ARCHIVES OF OPHTHALMOLOGY. Edited by Dr. F. KNAPP, of New York, and Dr. C. SCHWEIGGER, of Berlin. Vol. XIII. No. 1. G. P. Putnam's Sons, New York.

This number opens with an article on the "Development of Glaucoma," by Dr. Mooren, of Düsseldorf. As might be expected, it shows the marks of enormous experience and great clinical powers of observation. We note the following points: (*a*) Glaucoma may be associated with a degenerative form of optic neuritis; (*b*) it is sometimes impossible with the ophthalmoscope alone to distinguish between the atrophic and glaucomatous excavations; (*c*) an "immense number of iridectomies" have been made for "glaucoma simplex" which never should have been performed; (*d*) the blood-vessels play an important part in the genesis of glaucoma; (*e*) the excavation is produced principally by the degeneration of the nerve-tissue; the degree of pressure has comparatively little to do with it. Then follow three papers by Pagenstecher, of Wiesbaden: (*a*) "Contribution on Orbital Cellulitis." Carious teeth may give rise to orbital cellulitis; illustrative cases are given. (*b*) "Retro-ocular hemorrhage." This was the result of an injury; ophthalmoscopic observations are recorded and are of great value. (*c*) "Injury of the Eye by Lightning." In this case there was impairment of the dilating power of the iris, opacities of the crystalline lens, and an obscure affection of the optic nerve. Dr. George S. Norton reports "A Case of Abscess of the Brain, with Double Optic Neuritis." This case will be considered in detail in the next Report on Ophthalmology in this journal. Dr. Richey briefly reports a "A Case of Eczema Simplex, with Ametropia as its Cause." Dr. Hansell reports "A Case of Bi-Temporal Hæmianopia." This is an account of a very rare clinical experience. We would have been pleased to see perimetric charts of the fields. We notice that the word hemianopia is incorrectly printed throughout the paper *hæmianopia*. Dr. Williams reports "A Case of Exophthalmus, with Spontaneous Recovery;" Dr. Chisolm, "A Case of Glioma of the Right Eye." Dr. C. S. Turnbull gives a favorable account of his experience with boro-glyceride in the treatment of conjunctivitis trachomatosa. Theobald gives an interesting account of "Some Recent Theories regarding the Pathogeny of Sympathetic Ophthalmia." Knapp writes a paper on "Blindness from Retinal Thrombosis in Facial Erysipelas." This is referred to in detail in the last Report on Ophthalmology (*Medical Times*, July 26, 1884). The rest of the journal is occupied with communications on the use of jequirity. Wecken, Hasket-Derby, Chisolm, Webster,

Walker, Knapp, Gruening, and others give the results of their experience. H.

A MANUAL OF PRACTICAL HYGIENE. By EDMUND A. PARKES, M.D., F.R.S. Edited by F. S. B. F. DE CHAUMONT, M.D., F.R.S. Sixth Edition, with an Appendix. Vol. II. 8vo, 556 pages. New York, William Wood & Co.

This is the November number of Wood's Library for 1883, and is fully the equal in every particular of the first volume of the work, which was noticed in these columns some months ago. A large portion of the present volume is devoted to military hygiene. Other topics are the hygiene of habitations, removal of sewage, exercise, clothing, and climate. In a brief but practical article on disposal of the dead, preference is given to the plan of cremation, the author remarking truly that the only valid argument against it is the possible concealment of crime; but this, instead of being an objection, might be converted into an advantage by rendering careful post-mortem inquiry more common. About one hundred and twenty-five pages are devoted to what is called an "American Appendix." This includes a series of articles on special topics in sanitation. They are written by well-known American authorities, and present the latest phases of sanitary science. As worthy of particular commendation appears to us the article by Dr. E. G. Love, of New York, on account of his thorough knowledge of the subject and the nonsensational tone in which he refers to the common adulterations, pointing out, as he does, that in most cases they are frauds, but not deleterious to health.

GLEANINGS FROM EXCHANGES.

DR. J. HUGHLINGS JACKSON ON EVOLUTION AND DISSOLUTION OF THE NERVOUS SYSTEM.—The following is an abstract of the first Croonian lecture on evolution and dissolution of the nervous system. After introductory remarks, the lecturer said, "Beginning with evolution, and dealing only with the most conspicuous aspects of it, we say of it that it is an ascending process of development in a particular order. We make three statements, which, although from three different stand-points, are about the very same thing: (1) Evolution is a passage from the most to the least organized, that is to say, from the lowest well-organized centres to the highest least organized centres; putting this otherwise, from centres comparatively well organized at birth up to those—the highest centres—which are continually organizing through life. (2) Evolution is a passage from the most simple to the most complex, again from the lowest to the highest centres. (3) Evolution is a passage from the most automatic to the most voluntary. So that the conclusion come to is, that the highest centres, which are the climax of nervous evolution, and which make up the 'organ of mind,' or physical basis of consciousness, are the least organized, the most complex, and the most voluntary.

"So much for the positive process by which the nervous system is 'put together,'—evolution. Now for the negative process, 'the taking it to pieces,'—dissolution.

"The process of dissolution being the reverse of evolution, just spoken of, little need be said about it here. It is a process of descending undevelopment, it is a 'taking-to-pieces' in the order, from the least organized, from the most complex and most voluntary, *towards* the most organized, most simple, and most automatic. I have used the word *towards*, for if dissolution were up to and inclusive of the most organized, etc., if, in other words, dissolution were total, the result would be death. I say nothing of total dissolution in these lectures. Dissolution being partial, the condition in every case of it is duplex. Evolution not being entirely reversed, some level of evolution is left. Hence the statement 'to undergo dissolution' is rigidly the equivalent of the statement 'to be reduced to a lower level of evolution.'"

After making a broad division into uniform and local dissolutions, and speaking briefly of the difference, the lecturer adduced examples of dissolution, admitting that he had selected the most illustrative cases.

1. Starting at the bottom of the nervous system, the first example is the commonest variety of progressive muscular atrophy. We see here that atrophy begins in the most voluntary limb,—the arm; it affects first the most voluntary part of that limb,—the hand; and first of all the most voluntary part of the hand; it then spreads to the trunk, in general to the more automatic parts.

2. Going a stage higher, we come to hemiplegia, owing to destruction of part of a plexus in the mid-region of the brain. Choosing the commonest variety of hemiplegia, we see that there is a loss of more or fewer of the most voluntary movements of one side of the body; we find that the arm, the more voluntary limb, suffers the more and longer; we find, too, that the most voluntary part of the face suffers the most.

3. The next illustration is paralysis agitans, which I believe to be a morbid affection of the cortex in the mid-region of the brain (middle motor centres). But, apart from all speculation, this disease illustrates dissolution well. In most cases the tremor affects the arm first, and most often begins in the hand, and most often in the thumb and index finger.

4. Next we speak of epileptiform seizures, which are unquestionably owing to disease

in the mid-region of the brain. Taking the commonest variety, we see that the spasm mostly begins in the arm, nearly always in the hand, and most frequently in the thumb or index finger.

5. The next illustration would be by paralyses after epileptiform seizures; in these cases, so far as I have observed, the paralysis affects those parts which have previously been most convulsed. If this observation be correct, nothing further need be said, for if the epileptiform seizure illustrates dissolution, then the paralysis which follows it, as its shadow, illustrates it too.

6. Chorea is a disease in which the limbs (the most voluntary parts) are affected more than the trunk, and the arms more than the legs. In this case the localization of the disease has not been made out; symptomatically it illustrates dissolution.

7. Aphasia.—This well illustrates the doctrine of dissolution, and in several ways. We consider a case of complete speechlessness. (*a*) There is loss of intellectual language, with persistence of emotional language; the patient cannot speak and cannot make signs, except of a very simple kind; yet, on the other hand, he smiles, frowns, varies the tones of his voice (he may be able to sing), and gesticulates as well as ever. (*b*) The frequent persistence of "yes" and "no" in the case of patients who are otherwise entirely speechless, is a fact of extreme significance. We see that the patient has lost all speech with the exception of the two most automatic of all verbal utterances. He retains those two words (really prepositions), which stand on the border-ground of intellectual and emotional language. "Yes" and "no" are evidently most general, for they assent to or dissent from any statement whatever; in consequence of being frequently used they are of necessity highly organized, and as a further consequence they are highly automatic. (*c*) A more important, though not more significant, illustration is, that the patient who cannot get out a word in speech nevertheless understands all that we say to him. Plainly this is loss of a most voluntary service of words, with persistence of a more automatic service of words. We get illustrations from small corners. (*d*) As regards the utterance "no," we find three degrees of service, yet a patient may use it emotionally only,—most automatic service; another patient may also be able to reply with it,—a less automatic, but still very automatic service of it (here this is some real speech). There is a still higher use of it which some patients have not got. A patient who can reply "no" to a question may be able to *say* "no" when told to do so. (*e*) A patient who is speechless may be unable to put out his tongue when told to do so; that he knows what is wanted is sometimes shown by his putting his fingers in his mouth to help out the organ. The organ serves well in all more automatic operations. Here is evidently a reduction to a more automatic condition: there is no movement of the tongue more voluntary than that of putting it out when told.

So far I have spoken of dissolution affecting one side of the nervous system on different levels. Coming to the highest centres, we speak of uniform dissolution, of cases in which all divisions of the centres are subject to the same evil influence. I choose some cases of insanity. In doing this I am taking up the most difficult of all nervous diseases. I grant that it is not possible to show, in detail, that they exemplify the principle of dissolution; but choosing simple cases we may show clearly that they illustrate it in general. I take a very commonplace example,—"delirium" in acute non-cerebral disease. This, scientifically regarded, is a case of insanity. In this, as in all other cases of insanity, it is imperative to take equally into account, not only the dissolution, but the lower level of evolution that remains. The patient's condition is partly negative and partly positive. Negatively he ceases to know that he is in hospital, and ceases to recognize persons about him. In other words, he is lost to his surroundings, or, in equivalent words, he is defectively conscious. We must not say that he does not know where he is *because* he is defectively conscious: his not knowing where he is is itself defect of consciousness. The negative mental state signifies, on the physical side, exhaustion, or loss of function somehow caused, of some highest nervous arrangements of his highest centres. We may conveniently say that it shows loss of function of the topmost layer of his highest centres. No one, of course, believes that the highest centres are in layers; but the supposition will simplify exposition. The other half of his condition is positive. Besides his *not* knowings, there are his *wrong* knowings. He imagines himself to be at home or at work, and acts, as far as practicable, as if he were; ceasing to recognize his nurse as a nurse, he takes her to be his wife. This, we may say, shows activity of the second layer of his highest nerve-centres, but which, now that the normal topmost is out of function, is the *then* highest layer; his delirium is the "survival of the fittest states" on his *then* highest evolutionary level. Plainly he is reduced to a more automatic (or, we may say, more familiar) condition. Being negatively lost to his present "real" surroundings, positively he talks and acts as if adjusted to some former "ideal" surroundings.

It is not to be understood that each is a different dissolution. All that is meant is, that each shows a reduction from the voluntary towards the automatic, in what the centre diseased represents. If we take extreme cases, the case of progressive muscular atrophy and the case of insanity (delirium

in acute non-cerebral disease), we say that the two are alike, because in each there is reduction to a more automatic condition, and we say, too, that they are unlike, since the parts of the nervous system morbidly affected are exceedingly different.

I have so far almost ignored the distinction between nervous states and mental states. Now, if the case of insanity be considered as a series of mental phenomena only, it would be absurd to compare or even to contrast it with progressive muscular atrophy, which is a series of physical phenomena only; but no difficulty can arise if it be understood that insanity or "disease of the mind" is, with medical men, disease of the highest nervous centres, revealing itself in a series of mental phenomena. We compare and contrast disease of the highest centres with disease of certain anterior horns (some lowest centres), revealing itself in atrophy of muscles. But, acknowledging this, it may be said that the two things are so exceedingly different that it is frivolous to compare or even to contrast them. Yet no one denies that each is a morbid affection of the central nervous system. This being granted, the rejoinder to those who insist on their extreme unlikeness is that the lesion in one is at the very bottom, in the other at the very top of the central nervous system; two lesions cannot possibly be farther apart in the central nervous system.

I next speak of different depths of dissolution. The deeper the dissolution, the shallower the level of evolution remaining. I take in illustration some of the eight cases. Of hemiplegia, owing to lesion of the internal capsule, there are three degrees or depths (of course the division into three degrees is arbitrary). In the first degree there is some paralysis of the face, arm, and leg; in the second degree there is more paralysis of these parts, and in addition there is a greater range of paralysis: the patient's head and eyes are turned from the side paralyzed. Here is illustrated what I call "compound order." The difference between the two degrees is not that in the second there is more paralysis only, nor that there is a greater range of paralysis only, but in both respects; there is more paralysis of the parts affected in the first degree, and extension of range of paralysis to parts beyond them. An adequate doctrine of localization has to account for such increase of paralysis in compound order. Then in the third degree of, or rather beyond, hemiplegia there is universal immobility. In this condition the patient has lost consciousness, and this loss may be said to explain why he does not move the "other" or "second" side of his body; but this explanation is obviously verbal. I admit other difficulties.

I now speak of degrees of epileptiform seizures, as illustrating depths of dissolution. There are degrees of these, from spasm of the thumb and index finger to universal convulsion. That these degrees are compound is very evident. The first stage of the fit is, to speak roughly, that the arm is a little affected; the second stage is that the arm is more affected, and the face a little; the third stage is that the arm is most affected, the face much, and the leg a little.

Degrees of dissolution were illustrated by taking a larger range of cases of aphasia from slight defect of speech to entire loss of it. It was insisted on that in each case the symptomatic condition was double,—that there was a negative and a positive element. To recognize this was particularly important in cases sometimes called "defect of speech;" the patient's not saying what we call the right words was alone owing to the disease,—the dissolution; his saying the wrong words was owing to activity of healthy nervous arrangements,—to activity on the lower level of evolution remaining.—*Medical Times and Gazette.*

TRIPLE PRIMARY MAJOR AMPUTATIONS IN A BOY FOUR YEARS OF AGE—RECOVERY.—Dr. J. B. Armstrong, of Chicago, Illinois, reports the case of a boy 4 years of age, receiving railroad injuries necessitating immediate amputation of, first, the right leg at the tuberosity of the tibia; second, the left thigh through its upper third; and, third, the left forearm, just below the elbow-joint. There were also extensive contused lacerations of the scalp. The case did nicely until the sixth day, when the thyroid gland became enlarged to such an extent as to interfere with deglutition. Aside from this latter rare complication, the child made a quick and perfect recovery. "He has a peculiar mode of getting about. Reaching out with the hand, he jumps off the hip to the distance measured, similar to the gait of a rabbit, and by a rapid repetition of this act manages to locomote with comfort and satisfaction."—*Archives of Pediatrics*, June 15, 1884.

FATAL CASE OF CHLOROFORM NARCOSIS.—Dr. Luther Sexton reports a case of a woman, 35 years of age, of intemperate habits, who was admitted to the Charity Hospital, New Orleans, for operation for necrosis of the tibia, supposed to be syphilitic. A similar operation under chloroform had been performed four months before without bad symptoms. Upon this occasion chloroform was administered by the same person and in the same way, using a cone into which about half a drachm of chloroform was poured. The cone was held at some distance from the mouth at first, but afterwards was closely applied. The first symptom noticed was that the pulse become more rapid and less strong. The muscles afterwards became rigid, and the respiration suddenly failed. All the usual methods—nitrite of amyl, ammonia, reversing the body, artificial respiration—were em-

ployed, but the patient could not be resuscitated. At the post-mortem there were old pleuritic adhesions in the chest, kidneys contracted, and urine contained albumen; bowels injected, heart dilated and distended with dark fluid blood and clots; a large fibrinous clot extended into the pulmonary artery; brain-substance was anæmic. Death appeared to have been caused by spasm of the diaphragm and respiratory muscles. The chloroform itself was tested and found to be pure.—*New Orleans Med. and Surg. Journal*, May, 1884.

RESORCIN FOR THE RELIEF OF PAIN.—Andeer finds that although resorcin has no benumbing effect upon the normal human skin, yet it has very decided analgesic properties in painful affections of the skin or mucous membranes. He also gives it internally in colic, cardialgia, and painful affections of the larynx, in increasing doses of one to ten gm. and also in the form of clysters (thirty-per-cent. solution), with satisfactory result.

MISCELLANY.

A BILL was recently introduced in the United States Senate providing for a reward of one hundred thousand dollars to any person of any nationality who shall discover the true cause or germ of yellow fever, with any certain means of effecting its prevention, destruction, or material modification, or who, without discovering the cause or germ of said disease, shall discover a certain and practical mode of effecting its prevention, destruction, or material modification.

PROF. ROBERT E. ROGERS has resigned the professorship of Chemistry in the Jefferson Medical College, on account of feeble health. His successor will probably be elected next month.

DR. GEORGE C. HARLAN has removed his office to No. 1515 Walnut Street, Philadelphia.

NOTES AND QUERIES.

EDITOR MEDICAL TIMES:

DEAR SIR,—In an article on some reckless experiments with cocculus indicus, in your issue of July 12, the author, Dr. Haynes, refers to the fatal case of poisoning from the agent reported by me in the *Medical News*, November 3, 1883, and remarks, "He states that no other fatal case is on record; but one can be found in Mitchell (*Therapeutics*, p. 312, 1850) which is almost the counterpart of Sozinskey's case."

Dr. Haynes has made a mistake. The case of Dr. Thomas D. Mitchell was not fatal; it was not even one of decided poisoning, for in spite of treatment with tobacco, pushed to the point of causing vomiting and purging, as the doctor thought, the woman got well.

Mine was a hopeless case. I used morphia hypodermically—the only remedy at hand. Chloral would possibly have been a better one, but from the vomiting and purging it could not have been given by the stomach to any purpose.

Dr. Haynes's mistake was doubtless made unintentionally; but, for truth's sake and in justice to me, I would ask you to be kind enough to publish this correction.

Yours respectfully,

THOMAS S. SOZINSKEY, M.D.

2210 FAIRMOUNT AVENUE, PHILA., July 22, 1884.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 20, 1884, TO AUGUST 2, 1884.

HEAD, JOHN F., COLONEL AND SURGEON.—Ordered to Portsmouth, New Hampshire, to meet the Greely party, and consult upon the proper course of treatment with a view to the entire restoration to health of Lieutenant Greely and the men of his command. S. O. 177, Paragraph 14, A. G. O., July 30, 1884.

WRIGHT, J. P., MAJOR AND SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 3, S. O. 89, Headquarters Department of Texas, July 17, 1884.

WRIGHT, JOSEPH P., MAJOR AND SURGEON.—Sick leave of absence extended three months on surgeon's certificate of disability. By Paragraph 12, S. O. 176, A. G. O., July 29, 1884.

WOODWARD, JOSEPH J., MAJOR AND SURGEON.—Sick leave of absence extended six months. Paragraph 9, S. O. 178, A. G. O., July 31, 1884.

HARTSUFF, ALBERT, MAJOR AND SURGEON.—Leave of absence extended one month. S. O. 79, Headquarters Division of the Missouri, July 18, 1884.

MCELDERRY, HENRY, CAPTAIN AND ASSISTANT-SURGEON.—So much of Paragraph 12, S. O. 165, A. G. O., July 16, 1884, as assigned him to duty in Department of the East is revoked, and he is ordered to report in person to the Surgeon-General of the army for duty in connection with World's Industrial and Cotton Centennial Exposition at New Orleans, Louisiana. Paragraph 12, S. O. 173, A. G. O., July 25, 1884.

FINLEY, J. A., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension, to take effect about September 1, 1884. Paragraph 2, S. O. 91, Headquarters Department of Texas, July 22, 1884.

REED, WALTER, CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Sidney, Nebraska, and ordered for duty as post surgeon, Fort Robinson, Nebraska, relieving Assistant-Surgeon Henry McElderry, U.S.A. Paragraph 2, S. O. 62, Headquarters Department of the Platte, July 22, 1884.

BENHAM, R. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Brown, Texas. Paragraph 1, S. O. 90, Headquarters Department of Texas, July 19, 1884.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months, to take effect when relieved from duty in Department of the Platte. Paragraph 2, S. O. 68, Headquarters Division of the Missouri, June 27, 1884.

TAYLOR, A. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Riley, Kansas. Paragraph 1, S. O. 153, Headquarters Department of the Missouri, July 29, 1884.

GANDY, C. M., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to commence between August 15 and 30, provided he furnish medical attendance at Fort Brady, Michigan, during his absence. Paragraph 5, S. O. 154, Headquarters Department of the East, July 30, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM JULY 20, 1884, TO AUGUST 2, 1884.

P. A. Surgeon G. E. H. HARMON, ordered to temporary duty at Norfolk Navy-Yard.